Bulletin Contents

TSB Article 98-2-1 has been superseded by Article 98-5-2.

Bulletin Contents

TSB Article 98-2-14 has been superseded by Article 98-4-25.

98-3, ***Publication Date: FEBRUARY 16, 1998***

Paint - Surface Defect Removal Without Repainting - Service Tip	**Article No. 98-3-3**

FORD:
1997 ASPIRE, PROBE, THUNDERBIRD
1997-98 CONTOUR
1998 CROWN VICTORIA, ESCORT, MUSTANG, TAURUS

LINCOLN-MERCURY:
1997 COUGAR
1997-98 MYSTIQUE
1998 CONTINENTAL, GRAND MARQUIS, MARK VIII, SABLE, TOWN CAR, TRACER

LIGHT TRUCK:
1997 AEROSTAR
1997-98 EXPEDITION, EXPLORER, F-150, F-250 LD, F-250 LD, MOUNTAINEER, RANGER, VILLAGER, WINDSTAR
1998 ECONOLINE, NAVIGATOR
1999 SUPER DUTY F SERIES

MEDIUM/HEAVY TRUCK:
1997 AEROMAX, CARGO SERIES, F & B SERIES, L SERIES, LOUISVILLE

ISSUE:
Exterior paint surface maintenance or damage repair where the basecoat does not show through should be restored without repainting. The restoration of gloss and luster may be enhanced with new techniques and three new Ford approved materials.

ACTION:
The following procedure is applicable to repair surface conditions such as dirt particles, "orange peel," runs, sags, industrial fallout stains, swirl marks, and scratches.

PREPARATION

The affected surface must be clean and dry to be repaired. Mask off adjacent panels, mouldings, stripe, and character lines as required.

CAUTION:
EYE PROTECTION SHOULD BE WORN. JEWELRY, WATCHES, AND BELT BUCKLES MUST BE REMOVED OR COVERED TO PREVENT ACCIDENTAL DAMAGE TO PAINT FINISH.

NOTE:
CHECK PAINT FILM THICKNESS BEFORE AND AFTER PERFORMANCE OF REPAIRS. MAXIMUM PAINT FILM REMOVAL IS 0.3 OF A MIL.

NOTE:
PERFORM A TRIAL REPAIR ON A SMALL AREA. FIRST, TRY A POLISH; IF THIS IS NOT SUCCESSFUL, TRY BUFFING WITH FORD MEDIUM DUTY BODY SHOP PAINT CLEANER

(F6AZ-19530-BA) OR FORD HEAVY DUTY BODY SHOP PAINT CLEANER (F6AZ-19530-CA) AND, FINALLY, USE WET SANDING TO REMOVE THE CONDITION. USE THE MOST EFFECTIVE TECHNIQUE ON THE REMAINING AREAS. AN OUTLINE OF THE COMPLETE PROCEDURE AND REQUIRED MATERIALS FOLLOWS.

SERVICE NOTES

1. Remove sanding marks with Ford Medium or Heavy Duty Body Shop Paint Cleaner.

2. Swirl marks, evident after buffing, may be removed by polishing with Ford Light Duty Body Shop Polish (F6AZ-19530-AA).

3. Remove light scratches and small dirt particles with a power buffer and Ford Medium Duty Body Shop Pain Cleaner followed by polishing with Ford Light Duty Body Shop Polish.

4. Remove deep scratches and heavy dirt particles or "orange peel" by wet sanding.

REMOVING LIGHT SCRATCHES OR SWIRL MARKS AND/OR RESTORING A DULL FINISH

The Black and Decker Buffmaster® 5950 is the tool of choice. Variable speed buffers are available in a variety of buffing speeds. The recommended speed range is (1200-1750 rpm).

1. Apply a small amount of Ford Light Duty Body Shop Polish to the pad.

   - Always keep the face of the buffing pad completely flat to the surface, reducing the risk of buffer swirl marks. Watch your pad, especially on angled surfaces, to be certain that it stays flat

   - When "buffing out" oxidation or other paint defects with a cleaning material, use a liberal amount of material, slower buffing motion and added downward pressure to increase cutting action

2. When polishing, keep the pad flat against the surface. Do not bear down. The weight of the buffer is sufficient.

   CAUTION:
   DO NOT MIX PRODUCTS. USE A SEPARATE, DEDICATED BUFFING PAD FOR EACH PRODUCT TO ACHIEVE DESIRED RESULTS.

MEDIUM SCRATCHES, SMALL DIRT PARTICLES, GRIND MARKS AND SANDING MARKS

1. Apply Ford Medium Duty Body Shop Paint Cleaner to the panel with a clean compound pad on the wheel.

2. Spread the product evenly and continue buffing until the condition is removed.

3. Keep the wheel flat to the surface and use light to moderate pressure and long strokes.

4. Periodically check the finish and add product as required.

5. When buffing is complete, polish the panel as described previously.

Untreated wool cutting pads are the most effective cutting pads to use with Ford Heavy Duty Body Shop Paint Cleaner for removing paint defects and heavy oxidation. Following the use of a wool cutting pad, it may be necessary to polish the finish with a foam pad to remove the deep swirl marks.

NOTE:
ALWAYS KEEP THE PAD MOVING AND LIMIT YOUR STROKES OVER THE BLEMISH TO PREVENT EXCESSIVE HEAT BUILDUP AND POSSIBLE BURN-THROUGH. STOP IMMEDIATELY IF THE SURFACE BECOMES TOO HOT TO LAY THE PALM OF YOUR HAND ON IT. KEEP SURFACE TEMPERATURE BELOW 38°C (100°F).

NOTE:
HEAT BUILDUP: WHEN BUFFING CREATES EXCESSIVE HEAT, HAZING MAY APPEAR ACROSS THE SURFACE BEING BUFFED AND THE PRODUCT MAY DRY LIKE A FILM AND REFUSE TO BUFF OUT. TO REMEDY, WIPE THE AREA DOWN WITH COOL WATER, DRY THE SURFACE AND RESUME BUFFING, AT A LOWER RPM IF POSSIBLE.

NOTE:
STATIC: STATIC ELECTRICITY MAY BE PRESENT ON A PAINTED FIBERGLASS/PLASTIC SURFACE BEING BUFFED. THE MATERIAL MAY DRY LIKE A FILM OR TURN "GUMMY" AND BEGIN TO BALL UP. TO REMEDY, ATTACH A GROUNDING CLAMP TO THE SURFACE BEING BUFFED TO ELIMINATE THE STATIC CHARGE.

RUN AND SAG REMOVAL

This procedure consists of shaving the run(s) or sag(s) flush with a commercial single edge razor blade, shaving file or sanding.

NOTE:
IF IT IS NECESSARY TO SHAVE RUNS AND SAGS WITH A RAZOR BLADE, FIRST DULL THE CORNERS WITH SANDPAPER TO AVOID SCRATCHING THE ADJACENT AREA FINISH.

1. Lightly scrape the defect until the defect is level with the surface.

2. Wet sand or compound the surface to remove any small scratches.

3. Polish to complete the repair.

WET SANDING FOR DEFECT REMOVAL

- Typical paint defects that are repaired with this system include: dirt in paint, solvent "pop," cratering, "orange peel," drips, scratches, water spots, and acid rain

- Always use the least abrasive (highest grit) sanding products possible to do this job

The following wet sanding procedure utilizes light grit sandpaper or sanding blocks for removal of surface damage. These materials cut quickly, leaving a uniform finish requiring a minimum of buffing to restore gloss.

1. Mist or apply water on the area to be sanded. Continue to flush water on the surface during sanding for maximum lubrication.

2. Use sanding blocks or paper. Keep abrasion to the immediate area of the defect. Keep blocks in water when not in use.

3. If the cutting is too slow, switch to a lower grade block or paper and resume sanding. When 90% of the defect is removed, switch to a 2000 grade sand paper or sanding block to finish smoothing and prepare the surface for buffing.

4. Sanding blocks can be shaped to work on any angle. When the block is wet, rub it against a dry sanding block for shaping.

5. When using sanding papers, wrap the paper tightly around a backing pad. This pad evenly distributes pressure over the entire surface of the sanding paper. This creates a uniform sanding pattern.

6. Plan your strokes to limit the abrasion to the smallest area possible.

7. Always finish sanding with 2000 Grit Sanding Paper. 2000 grit paper will reduce the need for heavy compound, however, the area should be finished by using a cleaner that will remove the sanding scratches left by these papers.

   NOTE:
   IF MULTIPLE GRIT PAPERS ARE USED, IT IS A GOOD IDEA TO CHANGE THE DIRECTION OF SANDING STROKE TO ALLOW YOU TO SEE THAT THE PREVIOUS GRIT SCRATCH IS REMOVED.

8. Buff out sanding marks by applying Ford Medium Duty Body Shop Paint Cleaner with a "Foam" Cutting Pad (W7000). Follow with Ford Light Duty Body Shop Polish for a swirl-free gloss.

GENERAL TECHNIQUES AND HINTS

- "Foam" buffing pads yield maximum gloss and depth of color on all types of paint finishes without creating buffer swirl marks

- Always apply product directly to pad, not to oxidized paint surface. Dry paint absorbs material into pores upon contact

- Avoid short rapid strokes. Move the buffer slowly across the surface using long straight motions and overlap by 50% the buffing pattern left by the previous pass. This insures uniform coverage and allows both material and buffer to perform at maximum efficiency

- Avoid buffing directly on raised character lines. The reduced paint film on these surfaces increases the risk of paint burn-through. It is best to buff up to them from each side

- If a paint blemish remains after buffing, reapply a small amount of material over the blemish. Confine your buffing strokes to the immediate area of the blemish while applying additional downward pressure and keeping the pad flat

PART NUMBER	PART NAME
F6AZ-19530-AA	Light Duty Body Shop Polish (Swirl Free)
F6AZ-19530-BA	Medium Duty Body Shop Paint Cleaner (Dual Action Cleaner/Polish)
F6AZ-19530-CA	Heavy Duty Body Shop Paint Cleaner (Compound Power Cleaner)
	Locally Purchase The Following:
	Sanding Block
	Mirror Glaze Foam Cutting Pad
	Untreated Wool Pad
	Foam Polishing Pad
	2000 Grade Finesse Sanding Paper
	Backing Pad

OTHER APPLICABLE ARTICLES: NONE

WARRANTY STATUS: INFORMATION ONLY

OASIS CODES: 106000

98-4, ***Publication Date: MARCH 2, 1998***

Air Conditioning - R-12 To R-134a Retrofit Kit Availability - Vehicles With Factory Installed A/C Only	Article No. 98-4-8

FORD:
1986-93 CROWN VICTORIA, TAURUS, THUNDERBIRD
1988-93 ESCORT, FESTIVA, MUSTANG, TEMPO
1989-93 PROBE

LINCOLN-MERCURY:
1986-92 MARK VII
1986-93 COUGAR, GRAND MARQUIS, SABLE, TOWN CAR
1987-93 TRACER
1988-93 CONTINENTAL, TOPAZ

LIGHT TRUCK:
1986-93 AEROSTAR
1988-90 BRONCO II
1988-93 BRONCO, ECONOLINE, F SUPER DUTY, F-150-350 SERIES, RANGER
1991-93 EXPLORER
1993 VILLAGER

MEDIUM/HEAVY TRUCK:
1985-91 CL-9000
1985-94 L SERIES
1985-95 F SERIES
1989-94 CARGO SERIES

This TSB article is being republished in its entirety to include the latest level parts.

ISSUE:
This TSB article announces the Ford OEM air conditioning retrofit kit availability. Retrofit kits convert R-12 air conditioning systems to operate on R-134a refrigerant. All Ford kits are designed for specific vehicles and offer equivalent performance to the original R-12 system.

ACTION:
When a consumer inquires about a retrofit kit, refer to the following Charts to see if a kit is available from Ford. If the vehicle is not listed, a kit is not available from Ford.

The Chart identifies which components are included in each kit for the purpose of providing repair estimates. Ford recommends the use of R-12 in R-12 A/C systems as long as it is available and cheaper then retrofitting to R-134a. Ford does not recommend the use of any refrigerant other than R-134a or R-12.

NOTE:
THE REMOVAL OF MINERAL OIL DURING THE RETROFIT IS NOT REQUIRED UNLESS NOTED UNDER THE "FLUSHING PROCEDURE" COLUMN (M) IN THE CHARTS FOUND IN THIS TSB ARTICLE. THE POLYALKYLENE GLYCOL (PAG), SUPPLIED IN EACH KIT, MUST BE ADDED WITH R-134a. PAG OIL, MINERAL OIL AND R-134a CAN BE MIXED TOGETHER IN THE A/C SYSTEM WITHOUT CAUSING DAMAGE.

NOTE:
HFC-134a IS THE ONLY CFC-12 (R-12) REPLACEMENT REFRIGERANT APPROVED BY FORD MOTOR COMPANY.

Detailed service procedure instructions are provided with each retrofit kit.

Heading definitions for lettered columns found in the following charts:

- **A** = Condenser
- **B** = Compressor
- **C** = Accumulator
- **D** = Engine Fan and Clutch
- **E** = Electric Fan
- **F** = Air Deflectors
- **G** = Control Module
- **H** = Suction Hose
- **J** = Condenser-To-Compressor Discharge Hose
- **K** = Orifice Tube
- **L** = Miscellaneous*****
- **M** = Flushing Procedures

*****Miscellaneous kit items for all systems include: Cycling Pressure Switch (CPS), CPS adapter, Refrigerant Containment Switch (RCS), RCS wiring harness assembly, RCS adapter, low side service port adapter, high side charge port adapter, PAG oil, and retrofit label.

FORD/LINCOLN-MERCURY CAR APPLICATIONS

Vehicle	Model Year	Engine Size	Special Conditions	Kit Part Number	SRP*	Approximate Installation Time (Hrs.)***	A	B	C	D	E	F	G	H	J	K	L	M
Festiva	1988-93 **	1.3		F3BZ-19D783-A	$100.00	1.0											X	X
Tracer	1987-90 **	1.6		F0GY-19D783-A	$100.00	1.7											X	X
Escort / Tracer	1991-93	1.8	ATX	F3CZ-19D783-B	$146.67	1.0											X	
	1991-93	1.8	MTX	F3CZ-19D783-C	$253.33	1.3					X						X	
	1993	1.9		F3CZ-19D783-A	$253.33	1.5	X				X						X	
	1991-92	1.9		F2CZ-19D783-A	$253.33	1.5	X					X					X	
Escort	1988-90	1.9	CFI Only	F0CZ-19D783-B	$253.33	1.8	X					X					X	
	1989-90 **	1.9	EFI &EFI HO Only	F0CZ-19D783-A	$350.00	2.1	X		X			X		X			X	
	1988 **	1.9	EFI &EFI HO Only	E8CZ-19D783-A	$253.33	2.1	X		X			X		X			X	
Probe	1993 **	2.0		F32Z-19D783-B	$600.00	3.1	X	X	X							X	X	X
	1990-92	2.2	Non-Turbo	F22Z-19D783-B	$400.00	1.9	X										X	
	1989-92	2.2	Turbo	F22Z-19D783-C	$146.67	1.0											X	
	1989	2.2	Non-Turbo	F22Z-19D783-C	$146.67	1.0											X	
	1993 **	2.5		F32Z-19D783-A	$600.00	2.9	X	X	X							X	X	X
	1990-92	3.0		F22Z-19D783-A	$400.00	2.4	X				X						X	
Tempo / Topaz	1992-93	2.3	HSC	F33Z-19D783-A	$253.33	2.2											X	
	1988-91	2.3	HSC	F13Z-19D783-A	$253.33	1.8	X					X					X	
	1992-93	3.0		F43Z-19D783-B	$146.67	1.3											X	

FORD/LINCOLN-MERCURY CAR APPLICATIONS (Continued)

Vehicle	Model Year	Engine Size	Special Conditions	Kit Part Number	SRP*	Approximate Installation Time (Hrs.)***	A	B	C	D	E	F	G	H	J	K	L	M
Mustang	1990-93	2.3		F3ZZ-19D783-A	$400.00	1.5	X										X	
	1988-93	5.0		F3ZZ-19D783-B	$500.00	2.9	X					X					X	
Taurus / Sable	1986-90	2.5		F0DZ-19D783-A	$253.33	2.6	X					X					X	
	1992-93	3.0		F3DZ-19D783-D	$253.33	2.0	X					X			X		X	
	1986-91	3.0		F1DZ-19D783-B	$253.33	2.4	X					X					X	
	1992-93	3.0	SHO	F3DZ-19D783-A	$253.33	1.9	X					X					X	
	1989-91	3.0	SHO	F1DZ-19D783-C	$253.33	2.2	X					X			X		X	
	1993	3.2	SHO	F3DZ-19D783-C	$253.33	2.4	X					X			X		X	
	1992-93	3.8		F3DZ-19D783-B	$146.67	2.3							X				X	
	1988-91	3.8		F1DZ-19D783-A	$253.33	2.6	X					X	X				X	
TBird / Cougar	1989-93	3.8		F3SZ-19D783-C	$253.33	1.5	X					X					X	
	1989-93 **	3.8	Super Coupe	F3SZ-19D783-B	$253.33	2.2	X					X					X	X
	1991-93	5.0		F3SZ-19D783-C	$253.33	1.5	X					X					X	
	1986-88	5.0		E8SZ-19D783-A	$520.00	1.9					X	X					X	
Crown Vic / Grand Marquis	1992-93	4.6		F3AZ-19D783-A	$500.00	2.5	X		X	X		X		X			X	
	1992-93	4.6	Trailer Tow / Police	F3AZ-19D783-B	$146.67	2.3			X			X		X			X	
	1986-91	5.0		F1AZ-19D783-A	$390.00	2.4					X	X					X	
Continental	1991-93	3.8		F3OY-19D783-A	$253.33	2.7	X					X	X				X	
	1988-90	3.8		F0OY-19D783-A	$253.33	3.1	X					X	X				X	
Town Car	1991-93	4.6		F3VY-19D783-A	$500.00	2.5	X		X	X		X		X			X	
	1986-89	5.0		F0VY-19D783-A	$520.00	2.2	X				X	X					X	
	1990	5.0		F0VY-19D783-B	$520.00	2.2	X			X		X					X	
Mark VII	1989-92**	5.0		F2LY-19D783-A	$520.00	2.2	X		X		X						X	X
	1986-88 **	5.0		E8LY-19D783-A	$520.00	2.2	X		X		X						X	X

FORD/MERCURY LIGHT TRUCK APPLICATIONS																		
Vehicle	**Model Year**	**Engine Size**	**Special Conditions**	**Kit Part Number**	**SRP***	**Approximate Installation Time (Hrs.)****	**A**	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**J**	**K**	**L**	**M**
Ranger	1993	2.3, 3.0, 4.0		F37Z-19D783-A	$666.67	2.8					X	X					X	
	1990-92	2.3, 2.9, 3.0, 4.0		F27Z-19D783-A	$520.00	2.2	X				X	X					X	
	1989	2.9	w/ Auto. Trans.	FO7Z-19D783-A	$350.00	1.9						X					X	
	1989	2.3, 2.9	Exc. 2.9 w/ Auto. Trans.	F37Z-19D783-B	$520.00	1.9	X					X					X	
	1988	2.0, 2.3, 2.9		E87Z-19D783-A	$520.00	1.9	X					X					X	
Bronco II	1990	2.9		F27Z-19D783-A	$520.00	1.4	X				X	X					X	
	1989	2.9	w/ Manual Trans.	F37Z-19D783-B	$520.00	1.9	X					X					X	
	1989	2.9	w/ Auto. Trans.	FO7Z-19D783-A	$350.00	1.9						X					X	
	1988	2.9		E87Z-19D783-A	$520.00	1.9	X					X					X	
Villager	1993	3.0		F3XY-19D783-A	$146.67	1.1											X	
Aerostar	1986-93	3.0		F39Z-19D783-B	$520.00	2.4	X					X					X	
	1990-93	4.0	2-Wheel Drive	F39Z-19D783-C	$520.00	2.4	X					X					X	
	1990-93	4.0	4-Wheel Drive	F39Z-19D783-A	$520.00	2.4	X					X					X	
Explorer	1991-93	4.0		F3TZ-19D783-D	$600.00	2.3					X	X					X	
Bronco	1992	4.9		F3TZ-19D783-A	$600.00	2.5	X			X		X					X	
	1988-91	4.9		F1TZ-19D783-B	$600.00	2.5	X			X		X					X	
	1992-93	5.0, 5.8		F3TZ-19D783-B	$600.00	2.5	X			X		X					X	
	1988-91	5.0, 5.8		F1TZ-19D783-A	$600.00	2.5	X			X		X					X	

FORD/MERCURY LIGHT TRUCK APPLICATIONS (Continued)																		
Vehicle	**Model Year**	**Engine Size**	**Special Conditions**	**Kit Part Number**	**SRP***	**Approximate Installation Time (Hrs.)****	**A**	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**J**	**K**	**L**	**M**
F-Series	1992-93	4.9		F3TZ-19D783-A	$600.00	2.5	X			X		X					X	
	1988-91	4.9		F1TZ-19D783-B	$600.00	2.5	X			X		X					X	
	1992-93	5.0, 5.8		F3TZ-19D783-B	$600.00	2.5	X			X		X					X	
	1988-91	5.0, 5.8		F1TZ-19D783-A	$600.00	2.5	X			X		X					X	
	1992-93	Diesel		F3TZ-19D783-E	$666.67	2.8	X					X					X	
	1988-91	Diesel		F1TZ-19D783-D	$600.00	2.8	X					X					X	
	1992-93	7.5		F3TZ-19D783-C	$600.00	2.1	X					X					X	
	1988-91	7.5		F1TZ-19D783-C	$666.67	2.1	X					X					X	
Econoline	1992-93	4.9, 7.5		F3UZ-19D783-A	$600.00	2.5	X					X					X	
	1988-92	4.9		F1UZ-19D783-A	$600.00	2.9	X			X		X					X	
	1992-93	5.0, 5.8		F3UZ-19D783-B	$666.67	2.5	X			X		X					X	
	1988-91	5.0, 5.8		F1UZ-19D783-B	$600.00	2.9	X			X		X					X	
	1992-93	Diesel		F3UZ-19D783-C	$600.00	2.2	X					X					X	
	1988-91	7.5, Diesel		F1UZ-19D783-C	$600.00	2.2	X					X					X	

FORD MEDIUM/HEAVY TRUCK APPLICATIONS																		
Vehicle	**Model Year**	**Engine Size**	**Special Conditions**	**Kit Part Number**	**SRP***	**Approximate Installation Time (Hrs.)*****	**A**	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**J**	**K**	**L**	**M**
F-Series Medium Duty	1985-95	All		F4HZ-19D783-A	$210.69	2.0											X	
L-Series ******	1985-94.5	All	See TSB 95-10-16	F4HZ-19D783-A	$210.69	2.0											X	
CL-Series	All	All		F4HZ-19D783-B	$69.89	2.0											X	
CF-Series Cargo	1989-94.5	All	w/ Signet A/C Kit	F4HZ-19D783-C	$194.69	2.0											X	

***Suggested Retail Price (SRP) DOES NOT include the cost of refrigerant or A/C repairs necessary.

****System flushing is required. SRP DOES NOT include cost of flushing agent.

*****Approximate installation times include the addition of refrigerant and system flushing.

******For L-Series vehicles built prior to the 1991 model year (vehicles built through December, 1991), replace the receiver/drier with an R-134a compatible receiver/drier. Refer to the following Compatibility Chart.

R-134a COMPATIBLE RECEIVER/DRIERS FOR PRE-1991-1/2 L-SERIES		
R-12 Production Part	R-12 Service Part	R-134a Replacement
E7HT-19959-AB		F4HZ-19959-C
E7HT-19959-BA		F4HZ-19959-D
E7HT-19959-CA		F4HZ-19959-E
FOHT-19959-BA		F4HZ-19959-F
	F2HZ-19959-A	F4HZ-19959-G

OTHER APPLICABLE ARTICLES:

- **95-10-16**

SUPERSEDES: 96-20-9

WARRANTY STATUS: INFORMATION ONLY

OASIS CODES: 205000, 208000, 208200, 208999

98-4, ***Publication Date: MARCH 2, 1998***

Tires - Lower Than Expected Tire Life - Tractor Units Equipped With 10,000 Lb, 12,000 Lb, Or 13,200 Lb Axles	**Article No. 98-4-24**

MEDIUM/HEAVY TRUCK:
1996-98 AEROMAX, LOUISVILLE

ISSUE:
In combined highway and city delivery applications, premium steering tire life on tractor units may be lower than expected when compared to previous L-Series models. This may be due to an increase in front wheel cut for improved low speed maneuverability and turning radius.

ACTION:
Replace the steering axle stop bolts. Replacing the stop bolts should help reduce wheel cut and the possibility of lower than expected tire life. Refer to the following Service Procedure for details.

SERVICE PROCEDURE

1. Refer to the appropriate Louisville/AeroMax Service Manual, Section 04, for front axle specifications and service procedures.

2. Verify front end alignment (camber and toe), vehicle alignment (axles and thrust angle), and wheel end play are within specifications. If any of these are not within specifications, they may result in premature tire wear. Repair as required.

3. After verification that the front end alignment and wheel end play are within specifications, remove the steering stop bolts.

4. Install new Steering Stop Bolts (F6HZ-3145-BB). A letter "Y" is stamped into the end of the new stop bolt for easy identification. This letter corresponds to the stop bolt setting.

PART NUMBER	PART NAME
F6HZ-3145-BB	Steering Stop Bolt

OTHER APPLICABLE ARTICLES: NONE

WARRANTY STATUS: INFORMATION ONLY

OASIS CODES: 306000

98-4, ***Publication Date: MARCH 2, 1998***

• **Cooling Fan - Electrical Wiring Schematics - Horton And/Or Kysor On/Off Fan Clutch - Vehicles Equipped With An FD1460 Engine, CAT 3306, 3126, Or 3406C Engine, Or Cummins N14 Or M11 Engine Built Before 10/7/96** • **Cooling Fan - Diagnosis Information - Horton And/Or Kysor On/Off Fan Clutch - Vehicles Equipped With An FD1460 Engine, CAT 3306, 3126, Or 3406C Engine, Or Cummins N14 Or M11 Engine Built Before 10/7/96**	**Article No. 98-4-25**

MEDIUM/HEAVY TRUCK:
1996-98 AEROMAX, LOUISVILLE

This TSB article is being republished in its entirety to correct the Other Applicable Article number listed.

ISSUE:
This TSB article will provide diagnostic information and wiring schematics for both the Horton and Kysor engine cooling fan clutches.

ACTION:
If the engine cooling fan is not functioning properly, refer to the following text and illustrations to aid in identifying the root cause of the concern.

DIAGNOSTIC INFORMATION

NOTE:
THIS TSB PROVIDES SPECIFIC ENGINE COOLING FAN SERVICE INFORMATION FOR VEHICLES EQUIPPED WITH AN FD1460 ENGINE, CAT 3306, 3126, OR 3406C ENGINE, OR CUMMINS N14 OR M11 ENGINE BUILT BEFORE 10/7/96. ADDITIONAL SERVICE INFORMATION ON FAN CLUTCH OPERATION CAN BE FOUND IN OTHER TECHNICAL SERVICE BULLETINS, IN SERVICE MANUALS AND THE ELECTRICAL AND VACUUM TROUBLESHOOTING MANUAL (EVTM).

FAN CLUTCH TIMER MODULE

- Controls the operation of the engine cooling fan
- Has a built in 3 minute timer that will cause the engine cooling fan to run a minimum of 3 minutes after the cooling fan has been turned on by either the engine temperature, the override switch, or the A/C high pressure switch
- Is located on the air cleaner support bracket just behind the air cleaner (Figure 1)

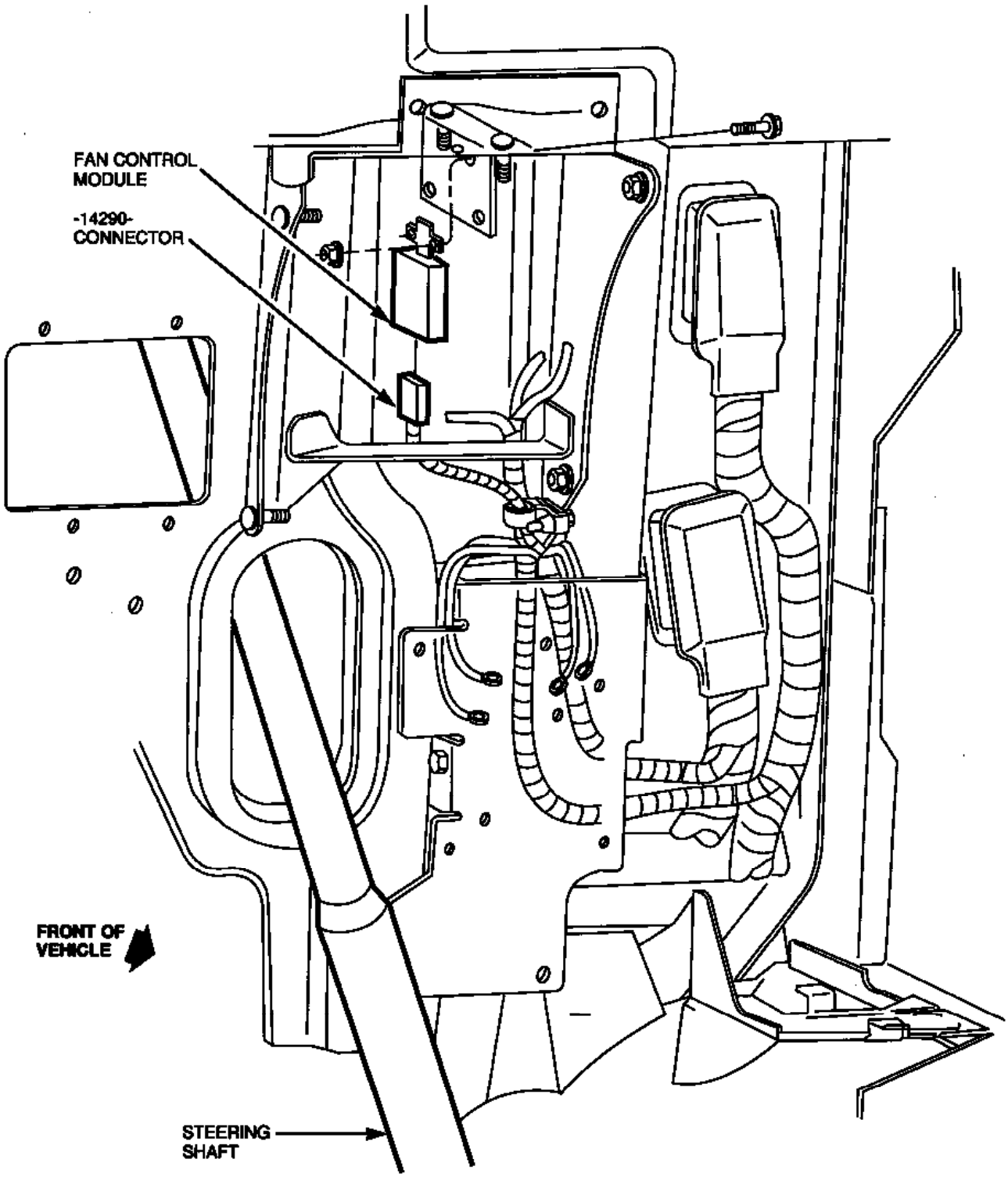

FAN CONTROL MODULE
-14290- CONNECTOR
FRONT OF VEHICLE
STEERING SHAFT
TB-5221-A

Figure 1 - Article 98-4-25

- Will turn on the engine cooling fan at 96-99°C (205-210°F)
- Has a 5-pin connector which attaches to Connector 192 of the -14290- wiring harness. Each pin's function is provided below:
  - Pin A - Circuit 517 (BK/W) module power from Fuse 12
  - Pin B - Circuit 57 (BK) module ground
  - Pin C - Circuit 936 (BK) on Kysor clutches goes to the fan control solenoid or Horton clutches to Relay R-21
  - Pin D - Circuit 39 (R/W) coolant temperature sensor
  - Pin E - Circuit 90 (GR/W) goes to the fan clutch override switch and/or A/C high pressure switch
- Will turn off the engine cooling fan after 3 minutes of operation if the engine temperature falls below 89°C (192°F)
- Will turn engine cooling fan on if the ground circuit is lost on Pin B
- Will turn engine cooling fan on if 12V power is lost on Pin A
- Turns the Kysor engine cooling fan clutch off by applying power to Pin C
- Turns the Horton engine cooling fan clutch off by applying power to Pin C which is wired to Pin 1 or 2 of Relay R-21. This will open Relay R-21 causing a loss of power to the fan control solenoid and shutting the fan off

The A/C high pressure switch will close under high A/C system pressure, grounding Circuit 90, signaling the module to turn the fan on.

The fan clutch override switch grounds Circuit 90 through the park brake switch, signaling the module to turn the engine cooling fan on. The park brakes MUST be applied for the override switch to operate.

The engine coolant temperature sensor is a thermister. The electrical resistance of the sensor decreases as engine temperature increases. If the temperature sensor is shorted to ground or unplugged, the module, as a default, will turn the engine cooling fan on.

ILLUSTRATIONS

- Fan clutch timer location - Figure 1
- Wiring schematic - Horton clutch - Figure 2

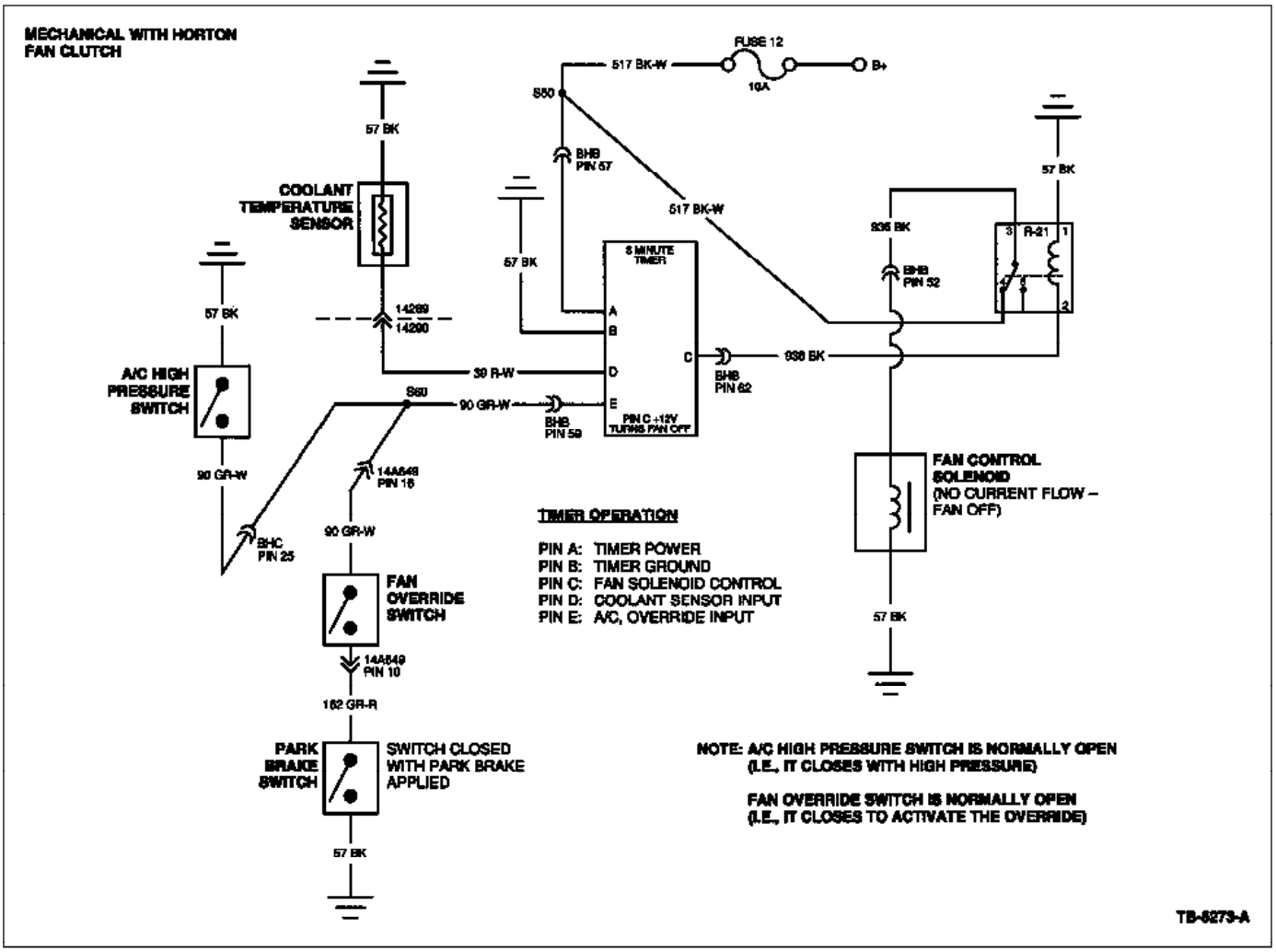


Figure 2 - Article 98-4-25

- Wiring schematic - Kysor clutch - Figure 3

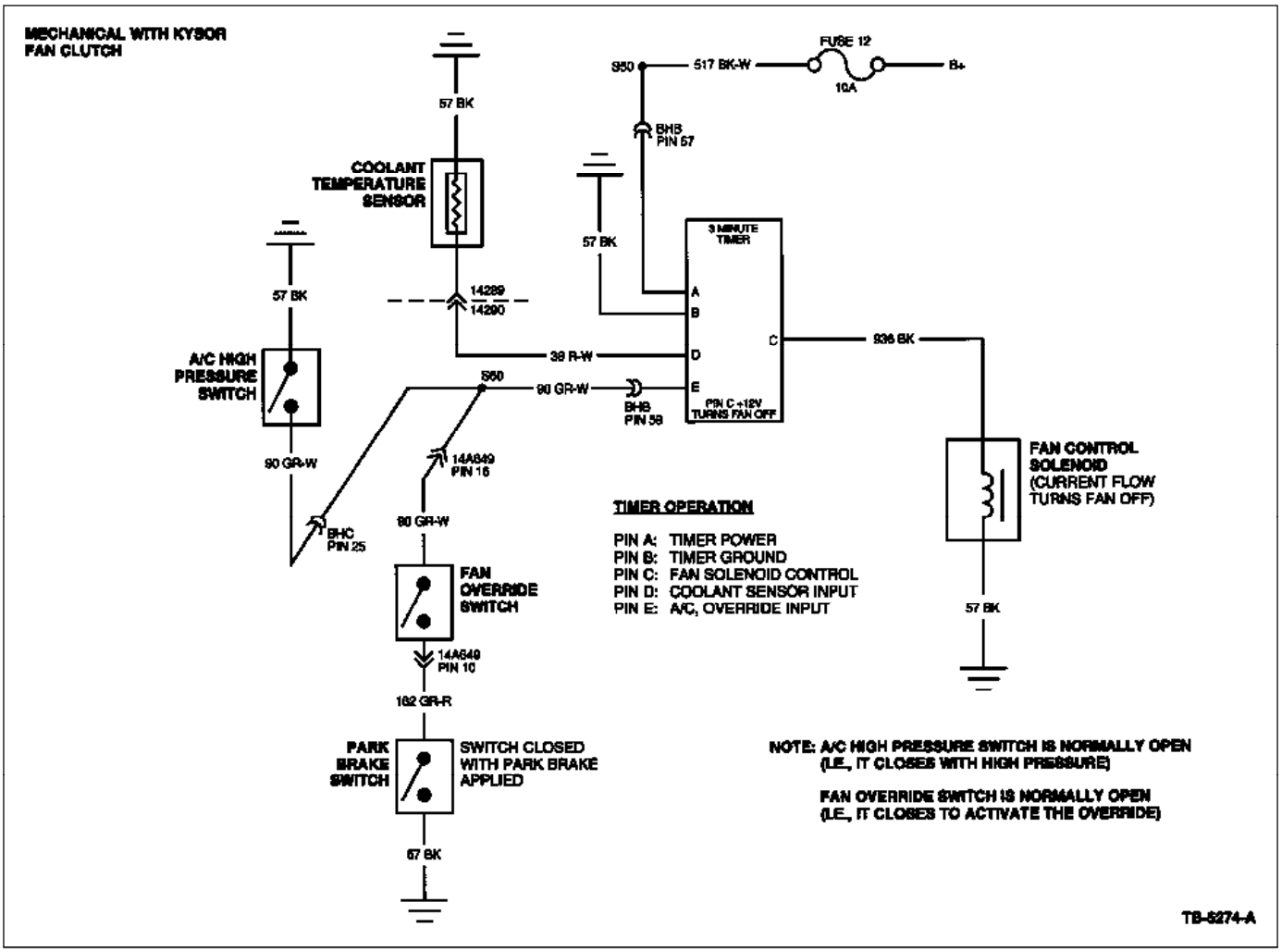


Figure 3 - Article 98-4-25

OTHER APPLICABLE ARTICLES:

➲ **97-22-18**

SUPERSEDES: 98-2-14

WARRANTY STATUS: INFORMATION ONLY

OASIS CODES: 208000, 402000, 499000

98-5 ***Publication Date: MARCH 16, 1998***

Tire - Tire Company Telephone Numbers For Customer Assistance	**Article No. 98-5-2**

FORD:
VICTORIA, ESCORT, MUSTANG
LINCOLN-MERCURY:
X
NTAL, GRAND MARQUIS, TOWN CAR
QUE
LIGHT TRUCK:
, F-150, F-250 LD, RANGER
ON, MOUNTAINEER
RIES
MEDIUM/HEAVY TRUCK:
CL-CLT-9000 SERIES
This TSB article is being republished in its entirety to update vehicle models and years.
ISSUE:
mer's concern.
ACTION:
Refer to the following Tire Service Telephone Numbers Charts for tire warranty service information.

UNITED STATES TIRE SERVICE TELEPHONE NUMBERS

Tire Manufacturer	Telephone Number
Firestone	1-800-356-4644
Bridgestone	1-800-847-3272
Michelin	1-800-847-3435 (Continental U.S.)
	1-907-276-2617 (Alaska)
	1-808-671-5457 (Hawaii)
Goodyear	1-888-637-3784
General	1-800-847-3349
	1-800-U-TAURUS (For Taurus Only)
Continental	1-800-338-6186
Yokohama	1-800-722-9888

CANADIAN TIRE SERVICE TELEPHONE NUMBERS

Tire Manufacturer	Telephone Number
Firestone	1-800-267-1318
Bridgestone	1-800-267-1318
Michelin	1-800-565-7638 (Province of Quebec)
	1-514-636-1940 (Montreal Local)
	1-800-461-8473 (Other Provinces)
Goodyear	1-800-461-4357
Continental	1-800-461-4357
Yokohama	1-800-663-8464 (Western Region)
	1-800-387-4924 (Central Region)
	1-800-361-9444 (Eastern Region)

OTHER APPLICABLE ARTICLES: NONE
SUPERSEDES: 98-2-1
WARRANTY STATUS: INFORMATION ONLY
OASIS CODES: 306000

98-5 *Publication Date: MARCH 16, 1998*

• **Lack Of Power - CAT 3126 - Lack Of Power And/Or "Whistling" Noise - Vehicles Equipped With CAT 3126 Engine Built Through 12/97** • **Noise - "Whistling" Noise And/Or Lack Of Power - Vehicles Equipped With CAT 3126 Engine Built Through 12/97**	**Article No. 98-5-17**

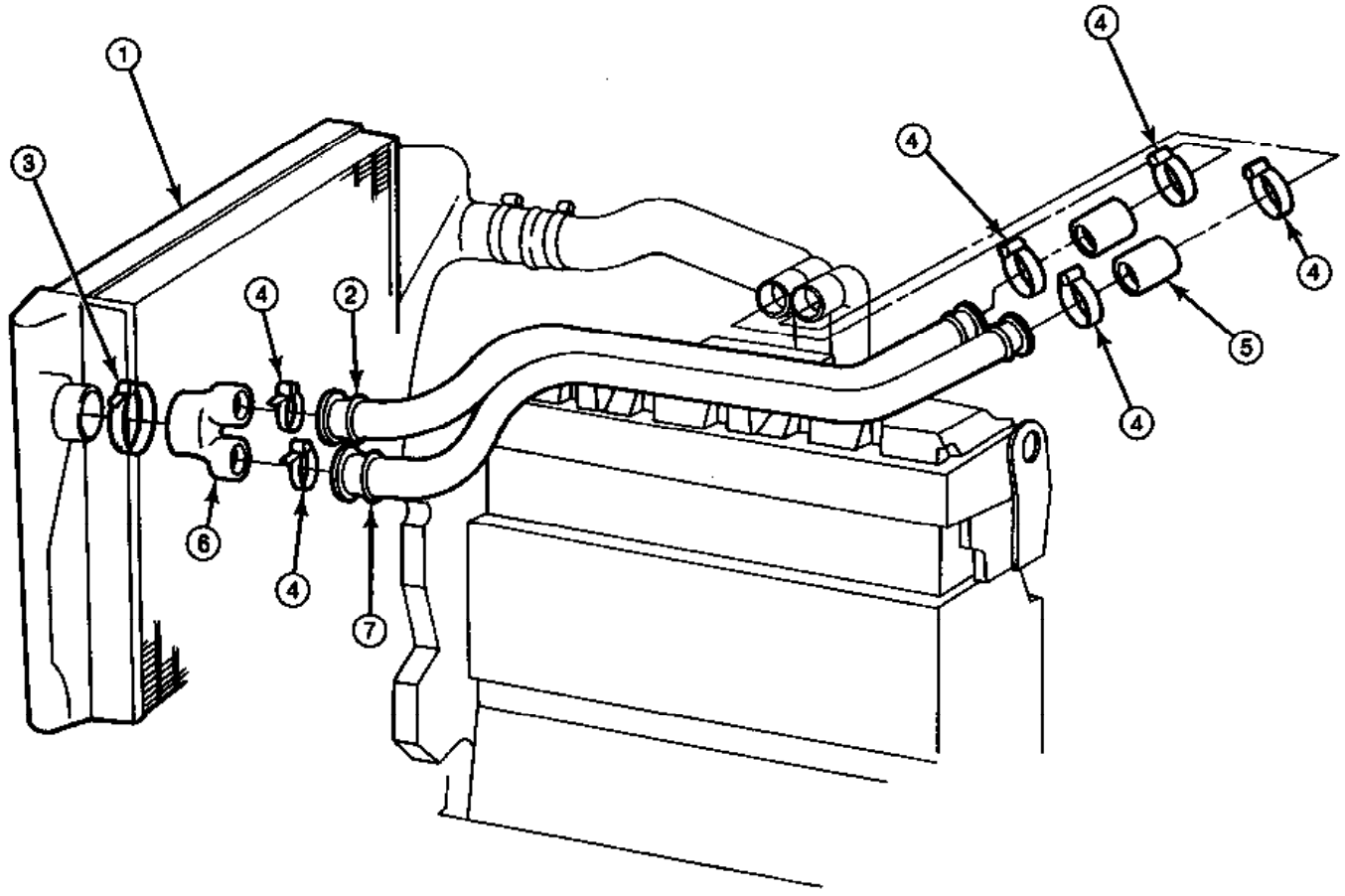
[illegible]

[illegible] vehicles may exhibit a lack of power and/or a "whistling" noise. This may be caused by a crack in the charge air cooler duct. The duct has been revised to be a two-piece assembly which should reduce the possibility of cracking. Refer to the following procedure for details.

SERVICE PROCEDURE

Refer to Figure 1 for the following procedure.

CAT 3126 ENGINE CHARGE AIR COOLER NEW DUCT INSTALLATION



Item	Description
1	Charge Air Cooler
2	New Inner Duct
3	Clamp – Charge Air Cooler-To-Connector
4	Clamp – Connector-To-Duct
5	Connector – Duct-To-Engine
6	Connector – Charge Air Cooler-To-Duct
7	New Outer Duct

Figure 1 Article 98-5-17

1. Remove the (4) clamps that attach the engine charge air cooler duct assembly to the rubber connectors.
2. Remove the duct assembly from the charge air cooler and the engine. Discard the duct assembly but retain the clamp
3. Inspect the rubber connectors and clamps to be sure they are serviceable - if not they should be replaced.
4. Position the (2) clamps over the inner duct, then install the duct into the charge air cooler connector and then into the engine
5. Position the (2) clamps over the outer duct, then install the duct into the charge air cooler connector and then into the engine
6. Torque the clamps to 2.4 N.m (27.36 lb.in)

PART NUMBER	PART NAME
F8HS-6K770-BA	Inner Duct
F8HS-6K770-CA	Outer Duct

OTHER APPLICABLE ARTICLES: NONE

WARRANTY STATUS: Eligible Under Basic Warranty Coverage And Emissions Warranty Coverage

LABOR ALLOWANCE

OPERATION	DESCRIPTION	TIME
980517A	Replace Duct	0.4 Hr.

DEALER CODING

BASIC PART NO.	CONDITION CODE
6K770	01

OASIS CODES: 499000, 614000, 614500, 614600

Engine - Oil Level Indicator Hard To Install And/Or Contacts Crankshaft - Vehicles Equipped With FD1060 Engine Built Through 8/1/97	**Article No. 98-5-18**

MODELS: 1998 FREIGHTLINER

SERVICE PROCEDURE

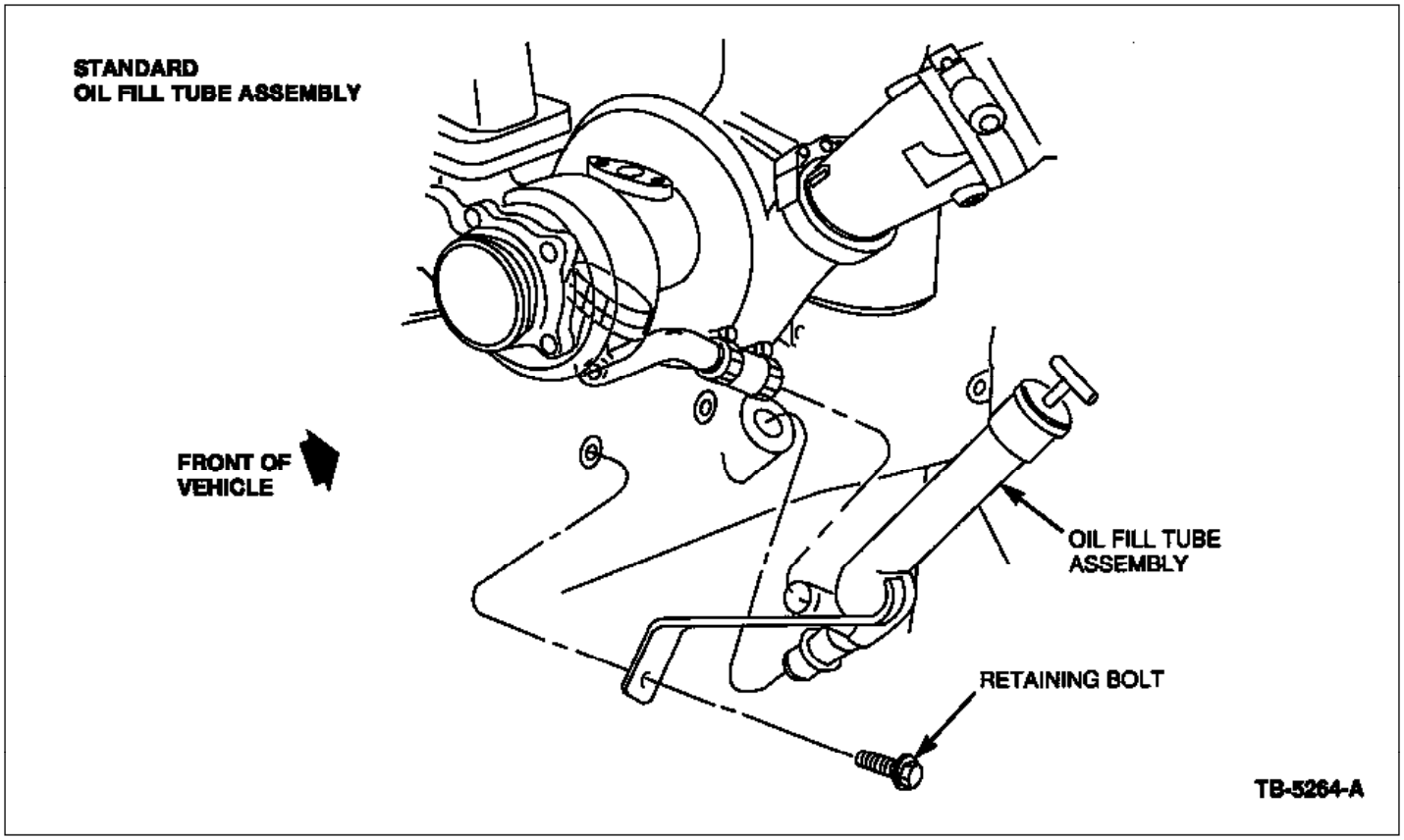
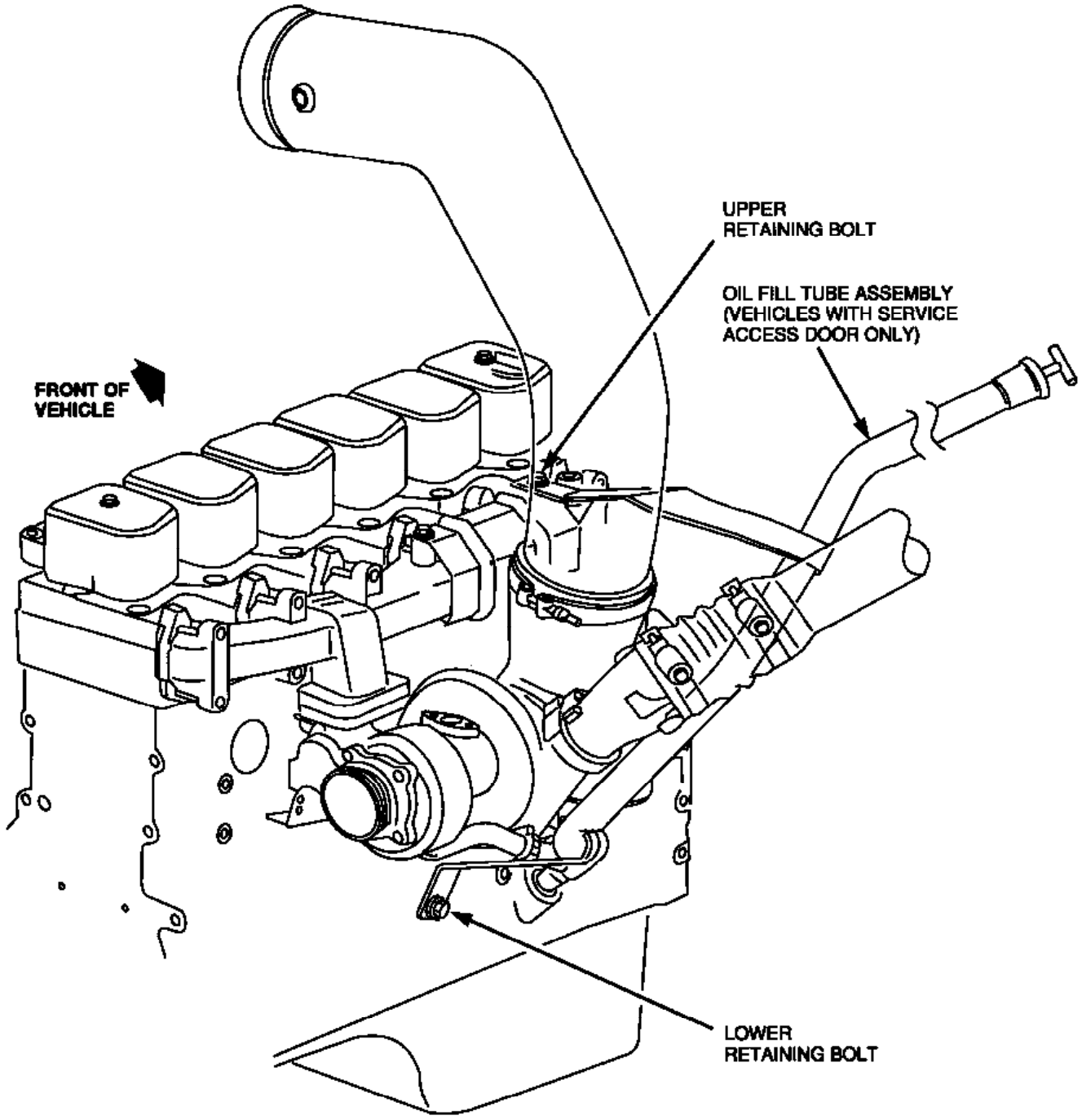


Figure 1 - Article 98-5-18

OPTIONAL EASY ACCESS OIL FILL TUBE
VEHICLES WITH HOOD SERVICE ACCESS DOOR



TB-5265-A

Figure 2 Article 98-5-18

1. Clean the area around the engine oil fill tube assembly, especially where the tube connects with the block.
2. Remove the dipstick.
3. Remove the fill tube bracket bolt(s) and retain. There are two (2) bolts used on vehicles with the optional Easy Reach oil fill tube.
4. Remove the fill tube assembly from the engine.
5. Remove the fill tube seal and discard.
6. Loosen the hose clamps and slide the hose off of the fill tube.
7. Coat a new fill tube seal with clean engine oil and install on the fill tube.
8. Install the fill tube assembly into the engine.
9. Position the fill tube bracket over the bolt hole and install the bolt(s) finger tight.
10. Slide the hose onto the fill tube and tighten the hose clamps.
11. Torque the bracket bolt(s) to 20-30 N·m (15-22 lb-ft).
12. Torque the lower bolt to 60-95 N·m (44-70 lb-ft) and the upper bolt (if equipped) to

PART NUMBER	PART NAME
F8HZ-6B667-AA	Standard Oil Fill Tube
F8HZ-6B667-BA	Easy Reach Oil Fill Tube
N601212-S2	Bolt
N630068-S2	Washer

OTHER APPLICABLE ARTICLES: NONE

WARRANTY STATUS: Eligible Under Basic Warranty Coverage

LABOR ALLOWANCE

OPERATION	DESCRIPTION	TIME
980518A	Replace Oil Level Indicator And Tube Assembly	0.6 Hr.

DEALER CODING

BASIC PART NO.	CONDITION CODE
6B667	07

OASIS CODES: 401000, 499000

- **Coolant Level Sensor - Availability Of Revised Coolant Level Sensor - Service Tip**
- **Cooling System - Coolant Level Sensor - Availability Of Revised Coolant Level Sensor - Service Tip**

Article No. 98-7-11

RUCK:
1998-98 AEROMAX LOUISVILLE
Current service replacement coolant level sensor has been discontinued. A revised sensor and jumper harness has been released. [illegible] jumper harness to the wire harness

PART NUMBER	PART NAME
XC4Z-10D968-AA	Coolant Level Sensor
F6HZ-14A382-AA	Jumper Harness

OTHER APPLICABLE ARTICLES: NONE
WARRANTY STATUS: INFORMATION ONLY

Bulletin Contents

The Scope of Article 9 has been changed by Article 98-18-2.
Provisions Governing Perfection and the Effect of Perfected Security Interests
page 98-18-2.

98-9 ***Publication Date: MAY 11, 1998***

Steering - Revised Camber Specification - Service Tip	**Article No. 98-9-22**

MODELS: WORKHORSE/UTILIMAX VANS/VILLE
This mber specification for the 10-12-13000 lb front axles has been revised in production.
The ed camber specification for the 10-12-13000 lb front axles is 1/8 ±3/8 degrees (current published specification is 3/8 ±3/8
OTHER APPLICABLE ARTICLES: NONE
WARRANTY STATUS: INFORMATION ONLY
CAUSE: [illegible]

Bulletin Contents

TSB Article 98-10-4 has been superseded by Article 98-12-8.
Press [Continue] to view Article 98-12-8.

• **Air Conditioning - Identification Of Non-Ford Approved Refrigerants** • **Air Conditioning - Purging Air From System**	**Article No. 98-12-8**

VICTORIA, ESCORT, MUSTANG

RY:

ENTAL, GRAND MARQUIS, TOWN CAR

CAR

QUE

150, F-250 LD, RANGER

UTY

ON, MOUNTAINEER

ERIES

This TSB article is being republished in its entirety to update the tool part number for the Refrigerant Analyzer.

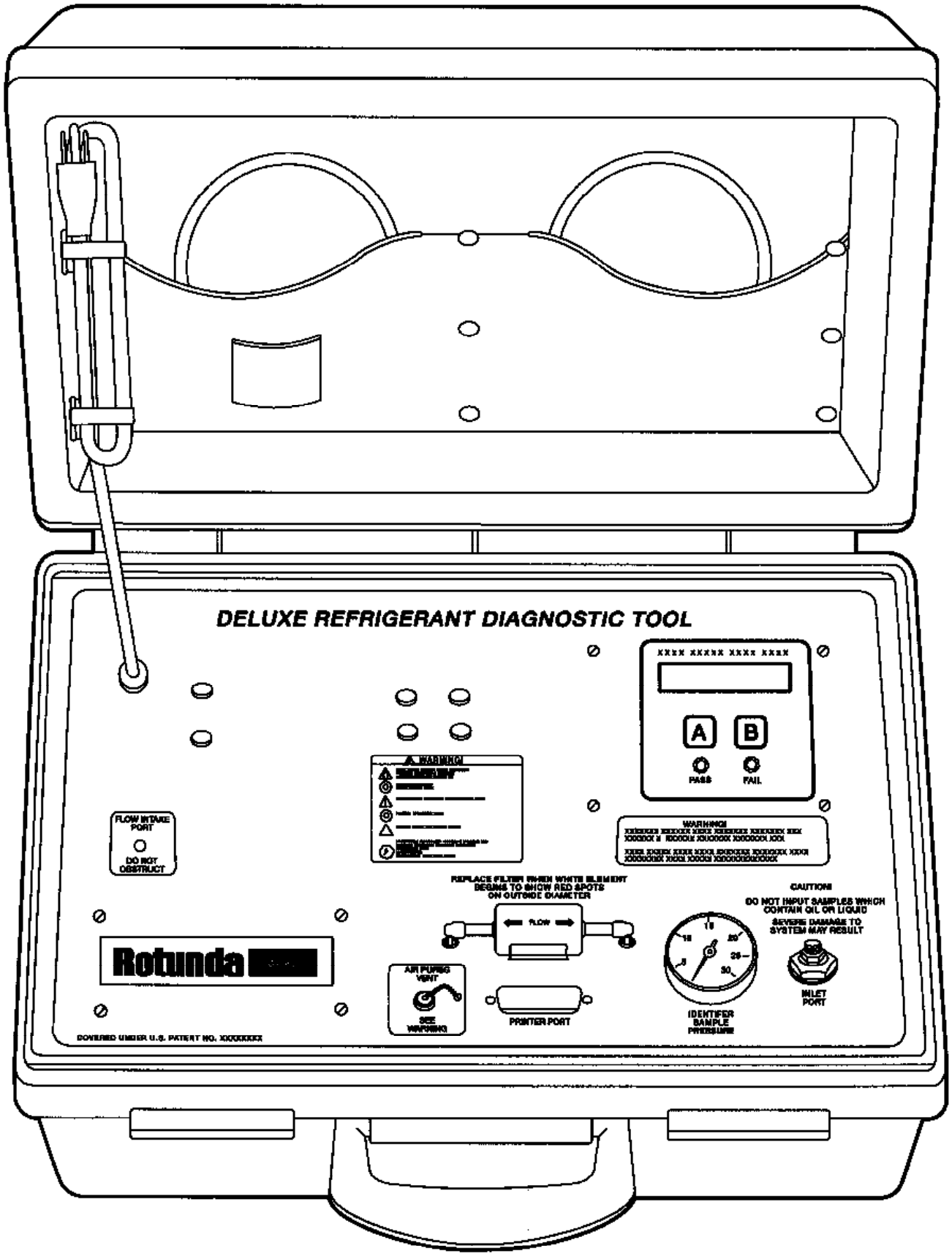
ing, is necessary to prevent dealer service equipment and refrigerant supplies from being contaminated with

being serviced with that recovery machine. Refer to the following text.

cross-contamination of

A/C REFRIGERANT ANALYZER FUNCTION

erant


DELUXE REFRIGERANT DIAGNOSTIC TOOL
XXXX XXXXX XXXX XXXX
A
B
PASS
FAIL
WARNING!
FLOW INTAKE PORT
DO NOT OBSTRUCT
REPLACE FILTER WHEN WHITE ELEMENT BEGINS TO SHOW RED SPOTS ON OUTSIDE DIAMETER
FLOW
CAUTION!
DO NOT INPUT SAMPLES WHICH CONTAIN OIL OR LIQUID
SEVERE DAMAGE TO SYSTEM MAY RESULT
Rotunda
AIR PURGE VENT
SEE WARNING
PRINTER PORT
IDENTIFIER SAMPLE PRESSURE
INLET PORT
COVERED UNDER U.S. PATENT NO. XXXXXXX

TB-4392-B

Figure 1 - Article 98-13-8

[illegible] system performance. Air will automatically be purged until a pure refrigerant with a less than 2% by weight air measurement is

RECOVERY OF CONTAMINATED REFRIGERANT

[illegible] refrigerant is detected, **DO NOT** recover the refrigerant into your R-134a or R-12 recovery/recycling equipment. Take the follo[illegible]

1. [illegible] test to verify contaminated refrigerant is present.
2. [illegible] additional cost to repair the system. The customer may wish to
3. [illegible] facility in your area which has the proper equipment for refrigerant recovery.

REPAIRING A CONTAMINATED A/C SYSTEM

[illegible] from the system it will be necessary to repair the system. Ford recommends that you do the [illegible]:

1. [illegible]
2. [illegible]
3. [illegible] to remove any oil that may be degraded due to the contaminated refrigerant.
4. [illegible]
5. [illegible] verify that the correct amount of clean refrigerant oil is present in the system.
6. [illegible]
7. Recharge the system, verify proper operation and leak test.

DISPOSAL OF CONTAMINATED REFRIGERANT

[illegible] cost will v[illegible] pound, plus the cost of round trip cylinder shipping. [illegible] and disposal companies. Disposal

- Omega Refrigerant Reclamation

  5263 North Fourth St.
  Irwindale, CA 91706
  (310) 698-0991, FAX: (310) 696-7908
- Full Cycle Global

  2966 Wireton
  Blue Island, IL 60406
  (708) 388-8551, FAX: (708) 399-6550
- U.S. Refrigerant Reclaim, Inc.

  12420 North Green River Road
  Evansville, IN 47711
  (800) 207-5931, FAX: (812) 867-1463
- Full Cycle Global

  343 South Airline Highway
  Gonzales, LA 70737
  (504) 644-5333, FAX: (504) 644-1609
- CFC Reclamation

  1321 Swift North
  Kansas City, MO 64116
  (816) 471-2511
- Full Cycle Global

  550 James St.
  Lakewood, NJ 08701
  (908) 370-3400, FAX: (908) 370-3088
- National Refrigerants, Inc.

  11401 Roosevelt Blvd.
  Philadelphia, PA 19154
  (215) 698-6620, FAX: (215) 602-8205
- Gartech Refrigerant Reclamation

  2002 Platinum
  Garland, TX 75042
  (214) 272-4070, FAX: (214) 272-6548
- Refrigerant Reclaim Services

  121 S. Norwood Dr.
  Hurst, TX 76053-7807
  (817) 282-0022, FAX: (800) 831-6182
- Full Cycle Global

  2055 Silber, Suite 109
  Houston, TX 77055
  (713) 681-7370, FAX: (713) 681-9947
- Refrigerant Reclaim, Inc.

  122 Old Stage Coach Road
  Dumfries, VA 22026
  (800) 238-5902, FAX: (703) 441-0393

OTHER APPLICABLE ARTICLES

- 94-14-3
- 95-18-4

SUPERSEDES: 98-10-4 **Eligibility Has Provisions Of Bumper To Bumper Warranty Coverage For 1993-99 Model Years, Basic Warranty Coverage For All Other Model Years**

LABOR ALLOWANCE

OPERATION	DESCRIPTION	TIME
981208A	Test A/C System For Contaminated Refrigerant	0.3 Hr.

DEALER CODING

BASIC PART NO.	CONDITION CODE
R-12	49

CASIC CODES: 202000, 203000

Cab - Vehicles With Hydromount Cab Mount - Reduced Mount Service Life	Article No. 98-12-15

WITH AEROMAX TRUCK:

A condition may exist where excessive vibration may be transmitted to the cab when the vehicle operates on poorly maintained highway [illegible] hydromounts with the standard rubber cab mounts from the Louisville model. Refer to the following [illegible] details.

SERVICE PROCEDURE

[illegible] THIS ACTION, CONSUMER MAY FIND THAT THE CUSTOMER IS REQUIRED SINCE THE [illegible] IF [illegible] LED COMPONENT, THERE SHOULD BE NO EXPECTATION OF SERVICE LIFE IMPROVEMENT VERSES THE [illegible]

Refer to Figure 1 for item callouts.

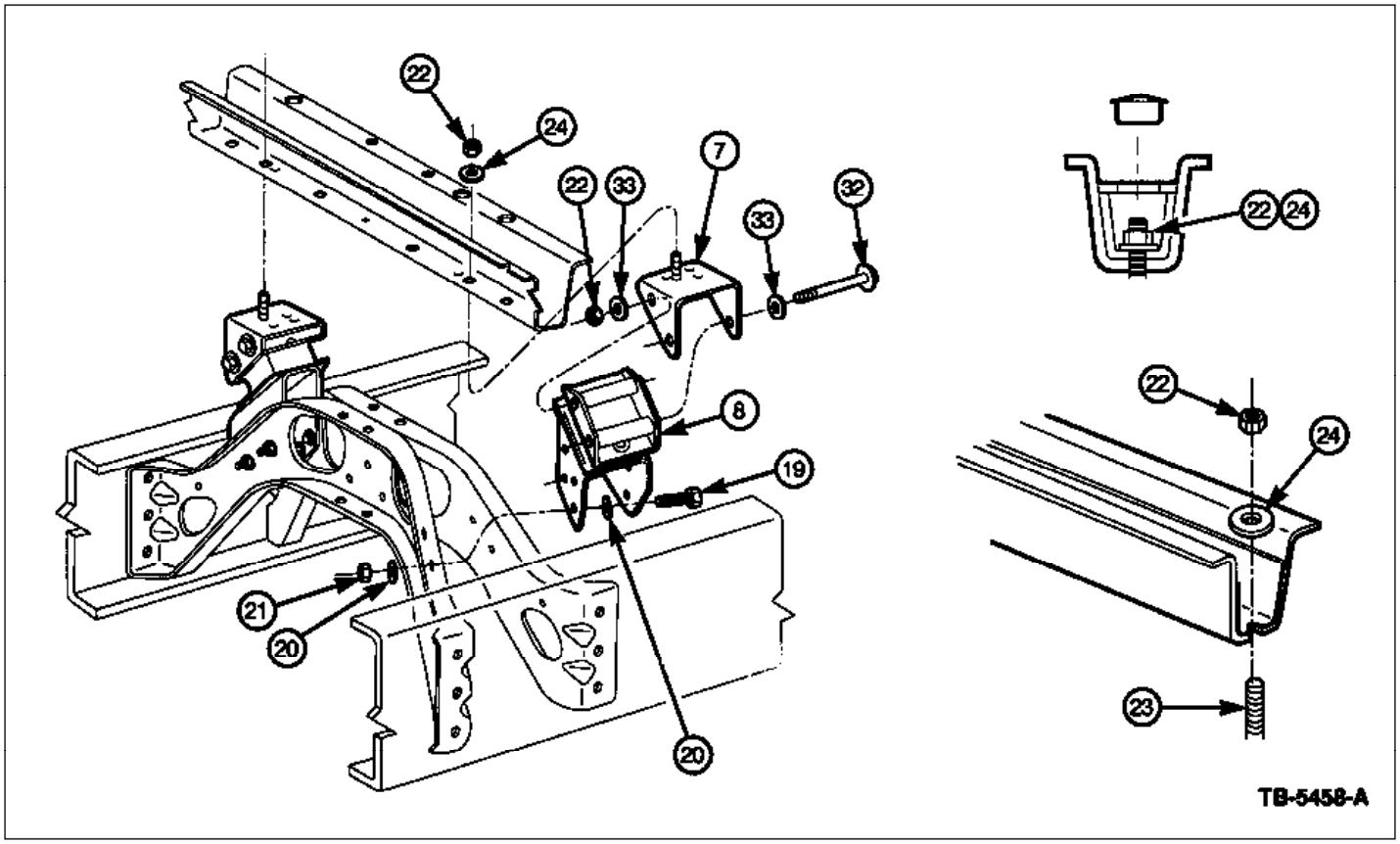


Figure 1 - Article 98-12-15

1. [illegible] the Louisville/AeroMax Workshop Manual, Section 502-02. Save washer (Item 24) and
2. [illegible] referring to the Workshop Manual, Section 502-02.
3. [illegible] Install rubber mount (Item 8) and position Item 7 so that the bolts (Item 32) can be
4. Torque all fasteners to specification.

FIGURE 1, ITEM CALLOUTS			
Item Number	**Quantity**	**Part Number**	**Description**
7	1	F7HZ-5B362-AA	Bracket - Cab Rear Suspension (RH)
7	1	F6HZ-5B363-AB	Bracket - Cab Rear Suspension (LH)
8	2	F7HZ-5A036-DA	Rubber Mount
19	8	N601313-S100	Bolt (M10-1.5x40 Hex Head)
20	16	N630088-S2	Washer (10mmx21x2.25 Flt)
21	8	N620602-S56	Nut (M10x1.5 Hex Lk P/T)
22	8	34989-S2	Nut (1/2-13 Hex Lk P/T)
23	2	Reuse	Screw (1/4-14x0.75 Hex Washer Head Tap)
24	2	Reuse	Washer (1/2-13 Hex Lk P/T)
32	4	58691-S2	Bolt (1/2-13x6.50)
33	8	44879-S2	Washer (1/2x1.06x0.10)

OTHER APPLICABLE ARTICLES: NONE

WARRANTY STATUS: Eligible Under Basic Warranty Coverage

LABOR ALLOWANCE

OPERATION	DESCRIPTION	TIME
981215A	Replace Mounts	1.7 Hrs.

DEALER CODING

BASIC PART NO.	CONDITION CODE
18A160	01

CASIC CODES: 204000, 205000, 703000

Cooling System - Cracked Or Broken Bug Screen Attachment Bracket	Article No. 98-12-16

MODELS: 1998 AEROMAX LOUISVILLE

SITUATION: Cracked or broken bug screen attachment bracket may cause the bug screen to contact the A/C condenser. This may be due to flexing of the bug screen when it is replaced.

CORRECTION: Replace the bug screen with a revised Bug Screen (XC45-8198-BA). Refer to the appropriate year Louisville/AeroMax Service Manual for removal and installation procedures.

PART NUMBER	PART NAME
XC45-8198-BA	Bug Screen

OTHER APPLICABLE ARTICLES: NONE

WARRANTY STATUS: Eligible Under Basic Warranty Coverage

LABOR ALLOWANCE

OPERATION	DESCRIPTION	TIME
981216A	Replace Bug Screen	0.6 Hr.

DEALER CODING

BASIC PART NO.	CONDITION CODE
8198	01

CASE CODES: 202000, 402000, 409000

Air Conditioning - Blower Motor Inoperative - Vehicles Built Through 12/97	Article No. 98-14-4

MODELS: 1998 MAXVON/SVILLE

SYMPTOM: [illegible] relay block being [illegible] to [illegible]

PART NUMBER	PART NAME
F8OZ-14N089-AA	Blower Motor Relay

OTHER APPLICABLE ARTICLES: NONE

WARRANTY STATUS: Eligible Under Basic Warranty Coverage

LABOR ALLOWANCE

OPERATION	DESCRIPTION	TIME
981404A	Replace Blower Motor Relay	0.3 Hr.

DEALER CODING

BASIC PART NO.	CONDITION CODE
14N089	42

CASIC CODES: 201200, 202000, 208000, 208200

- **Hard Start - Vehicles With CAT 3306 Or 3406C Engine**
- **No Start - Vehicles With CAT 3306 Or 3406C Engine**
- **Engine - CAT 3306 Or 3406C - Inoperative Air Intake Heater**

Article No. 98-14-6

MODELS AFFECTED

[illegible] WATERMAX VOLVO NISVILLE

[illegible] mode due to the diagnostic switch being in the ON position, connector C154 [illegible] Procedure for details.

SERVICE PROCEDURE

1. [illegible] determine if the air intake heater control module is functioning in the diagnostic mode. Refer to Parts and Service Procedure for details.
2. [illegible] is ON then turn it to OFF and recheck the operation of the air intake heater system. If the switch is [illegible]

NOTE: TO FIGURES 1 AND 2 FOR THE FOLLOWING TWO STEPS

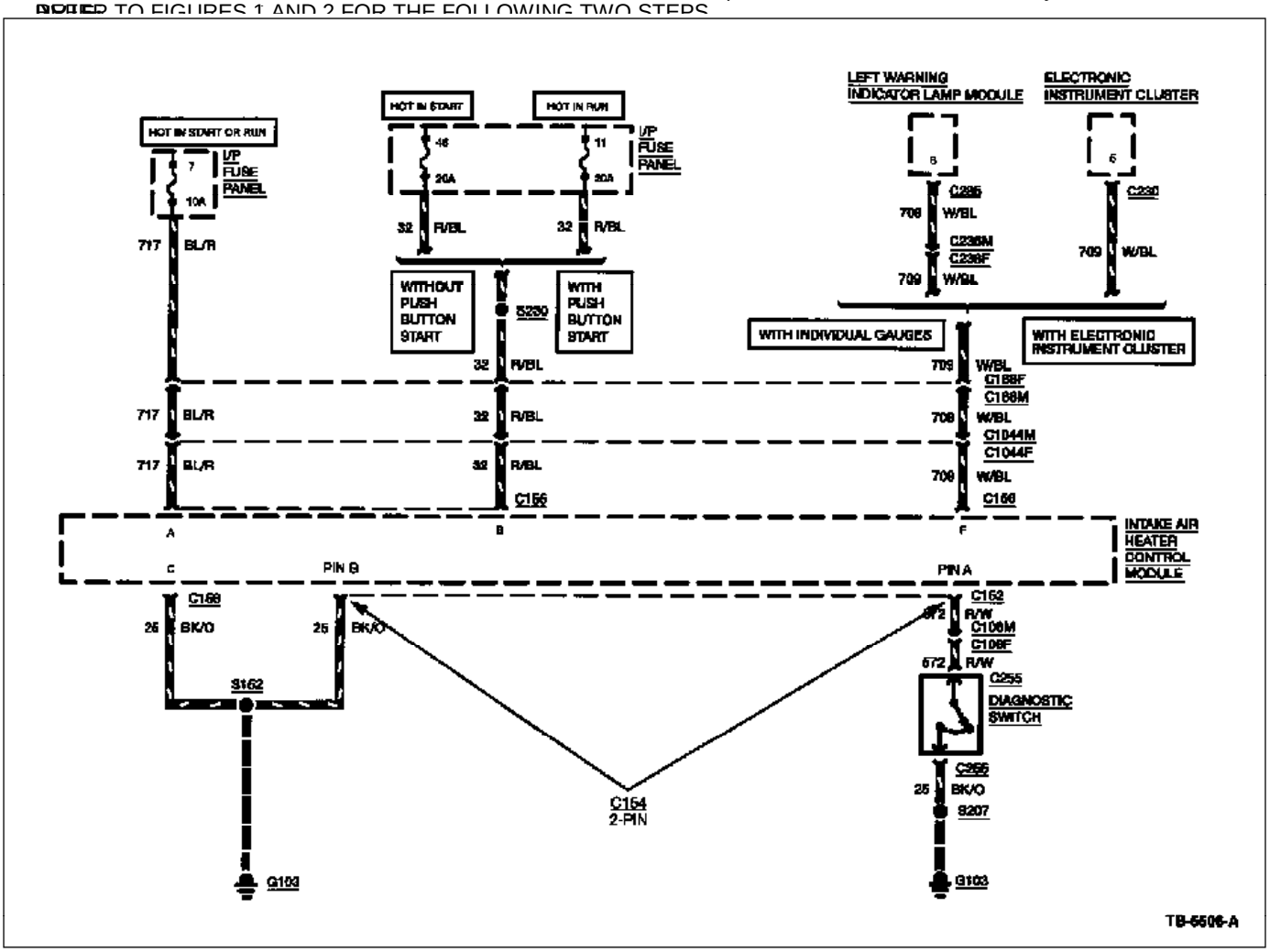


Figure 1 - Article 98-14-6

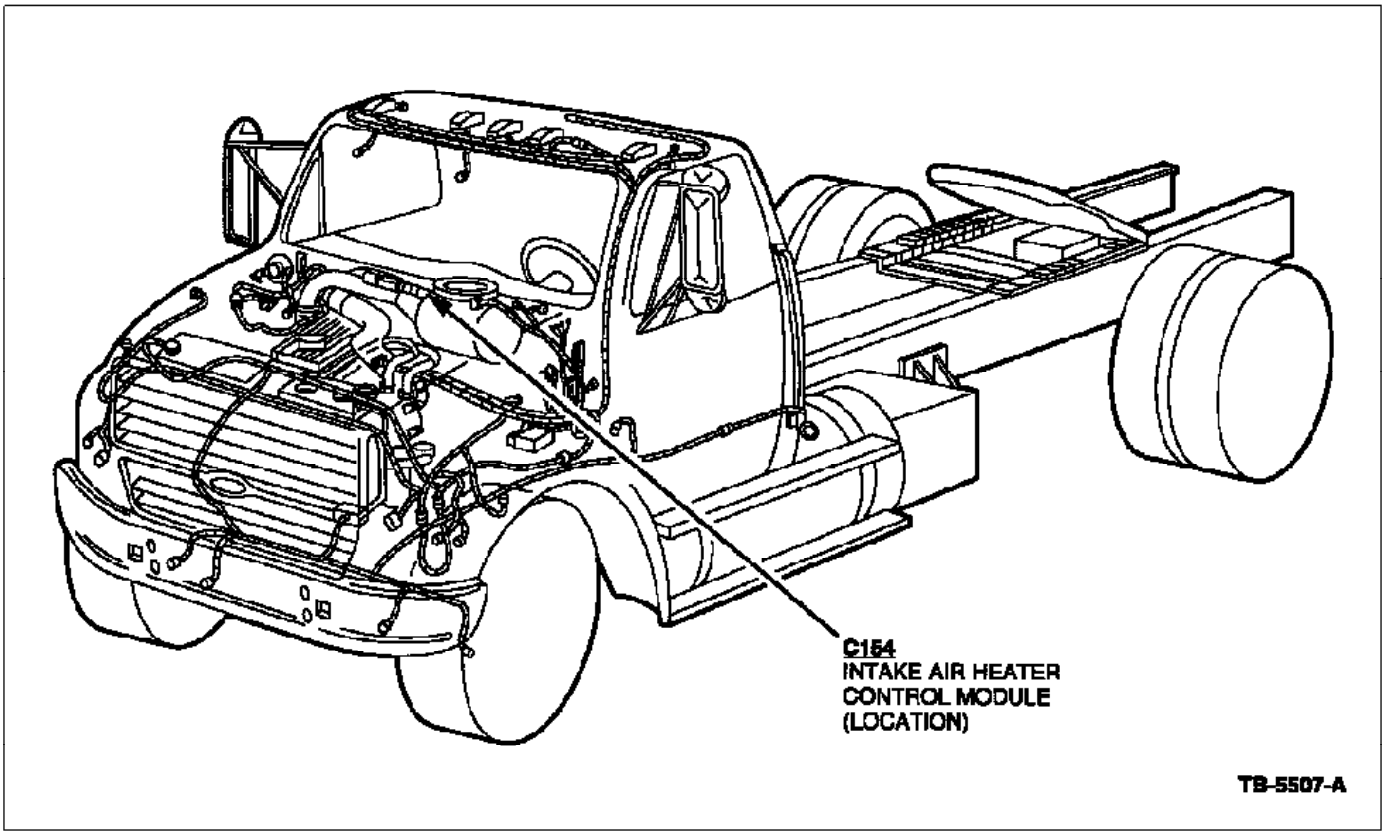


Figure 2 - Article 98-14-6

2. Using an ohmmeter, check for continuity to ground on harness circuits 972-R/W and 25-BK/O. DO NOT probe the module!
   - Circuit 572-R/W (module Pin A) should be OPEN (no continuity with ground) when the diagnostic switch is OFF and
   - Circuit 25-BK/O (module Pin B) should be GROUNDED (have continuity with ground) at all times. If one of these circuits is not within specification, it should be checked and repaired as necessary. If both circuits check out within specification, the problem is within the control module. Pin B. If not,
3. [illegible] control module Pin B. If not, refer to the Accutrol Troubleshooting Manual (EVTM), found in the appropriate Louisville/AeroMax Workshop Manual (WSM).

OTHER APPLICANT ATTRIBUTES: NONE

WARRANTY STATUS: Eligible Under Basic Warranty Coverage

LABOR ALLOWANCE

OPERATION	DESCRIPTION	TIME
981406A	Diagnose And Repair Air Intake Heater	0.4 Hr.

DEALER CODING

BASIC PART NO.	CONDITION CODE
9Y425	42

CAUSE CODES: 404000, 602300, 602300

• **Cracks - Front Engine Cover - Vehicles With CAT C10 Or C12 Engine** • **Engine - CAT C10 Or C12 - Front Engine Cover Cracks**	**Article No.** **98-15-7**

MODELS: 1998 FREIGHTLINER

SYMPTOM/CONDITION:
[illegible] mounting bolts bottoming out on the threads in the engine cylinder head, not allowing sufficient clamp load on the [illegible] (M12x1.75x110mm)). Depending on the [illegible] the correct bolts or repairing the bolt holes or front cover. They are:

- [illegible] (to obtain approval before performing Procedure B, contact
- Service Procedure C - Replace bolts, retap upper bolt threads and replace cracked front cover

SERVICE PROCEDURE A

1. Loosen the A/C Compressor and Generator pivot and adjusting bolts/nuts to position the belts out of your way.
2. Remove the Fan Clutch, [illegible]
3. [illegible] mount bolts and position the fan clutch to one side in order to remove the Fan Pulley support
4. Install the new Fan Pulley support bracket bolts, N601424-S2, torque the bolts to 80-110 N.m (59-88 lb.ft)
5. Reinstall the Fan clutch, then reinstall the Fan clutch, Generator, and A/C Compressor belts per the Service/Workshop Manual procedure.

SERVICE PROCEDURE B

NOTE THE COOLING MODULE IS REMOVED THERE IS NO NEED TO DISASSEMBLE IT.

1. Remove the Cooling Module per Service/Workshop Manual procedures.
2. Loosen the A/C Compressor, Fan Clutch and Generator mounting bolts and adjustment bolts to remove the drive belts.
3. Remove the A/C Compressor, Fan Clutch, Fan Mounting Bracket, and Generator per Service/Workshop Manual procedures.
4. Remove and discard the Fan Mounting Bracket lower bolt holes.
5. Install the new Fan Mounting Bracket bolts, N601424-S2, and torque to 80-110 N.m (59-88 lb.ft)
6. Reinstall the Fan Clutch, Compressor, A/C Compressor, and belts per Service/Workshop Manual procedures.
7. Reinstall cooling module per Service/Workshop Manual procedures.

SERVICE PROCEDURE C

NOTE THE COOLING MODULE IS REMOVED THERE IS NO NEED TO DISASSEMBLE IT.

1. Remove the Cooling Module per Service/Workshop Manual procedures.
2. Loosen the A/C Compressor, Fan Clutch and Generator mounting bolts and adjustment bolts to remove the drive belts.
3. Remove the A/C Compressor, Fan Clutch, Fan Mounting Bracket, and Generator per Service/Workshop Manual procedures.
4. Remove and discard the Fan Mounting Bracket lower bolt holes.
5. Remove the Fan Mounting Bracket per Caterpillar Service/Workshop Manual procedures.
6. Install the new Fan Mounting Bracket bolts, N601424-S2, and torque to 80-110 N.m (59-88 lb.ft)
7. Reinstall the Fan Clutch, Compressor, A/C Compressor, and belts per Service/Workshop Manual procedures.
8. Reinstall cooling module per Service/Workshop Manual procedures.

PART NUMBER	PART NAME
N601424-S2	Bolt (M12x1.75x110mm)
Obtain Locally	Front Engine Cover

OTHER APPLICABLE ARTICLES: NONE

WARRANTY STATUS: Eligible Under Basic Warranty Coverage

LABOR ALLOWANCE

OPERATION	DESCRIPTION	TIME
981507A	Replace Bolts Only	0.9 Hr.
981507B	Replace Bolts And Retap Upper Bolt Holes	3.9 Hrs.
981507C	Replace Bolts, Retap Bolt Holes, And Replace Front Engine Cover	4.7 Hrs.

DEALER CODING

BASIC PART NO.	CONDITION CODE
8625	01

CAUSE CODES: 402000, 409000

98-16 *Publication Date: AUGUST 11, 1998*

Hood - Hard To Move Up And Down - 101, 113, And 122 BBC Vehicles Built Through 12/97	**Article No. 98-16-2**

APPROVAL

SERVICE PROCEDURE

101, 113 AND 122 BBC VEHICLES

1. Open the hood and remove the two (2) spring retainers for the LH and RH upper pivot pins and remove the washers (Figure

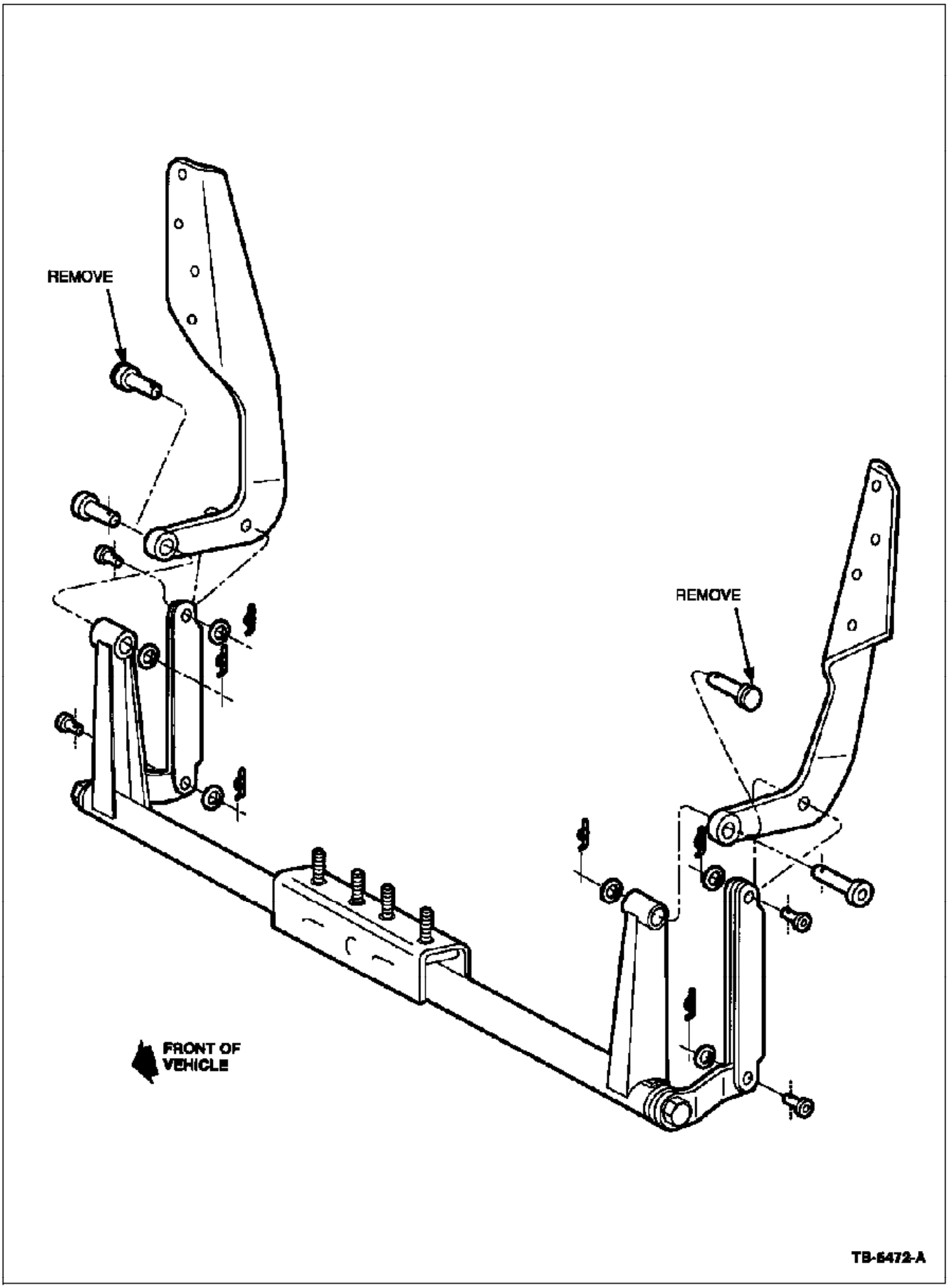


Figure 1 - Article 98.10.3

2. Remove the hood and support the LH and RH hood hinge mounting plate assembly using a floor jack or jack stands

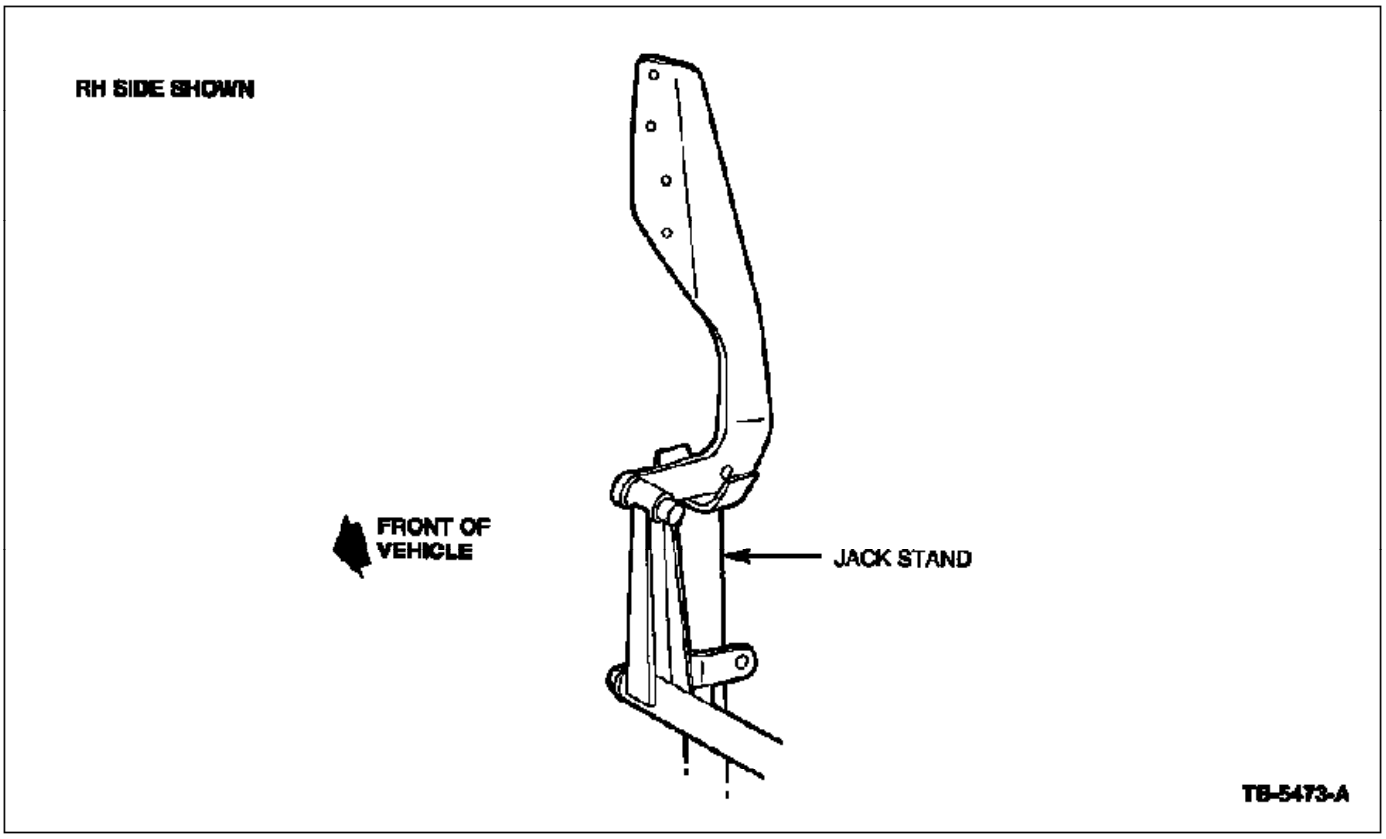


Figure 2 - Article 08-16-2

2. Remove the hood hinge pivot pin and replace with revised Hood Hinge Pivot Pin (XC4Z-9016A778-AA).
3. Reinstall the hood.
4. Carefully wipe the hood and replace the emphere. Reinstall the spring retainers into the upper pivot pins.
5. Lubricate the grease fittings with Ford Premium Long Life Grease (XG-1-C or equivalent) for 101 BBC vehicles only.

ADDITIONAL PROCEDURE FOR 113 AND 133 BBC VEHICLES ONLY

1. Remove the two hinge and hood assembly (Figure 1) and remove the washers from the lower torsion bar pivot housing.
2. Bend the shaft retaining tab on the lower torsion bar pivot housing inward using a flat screwdriver or equivalent (Figure 3).

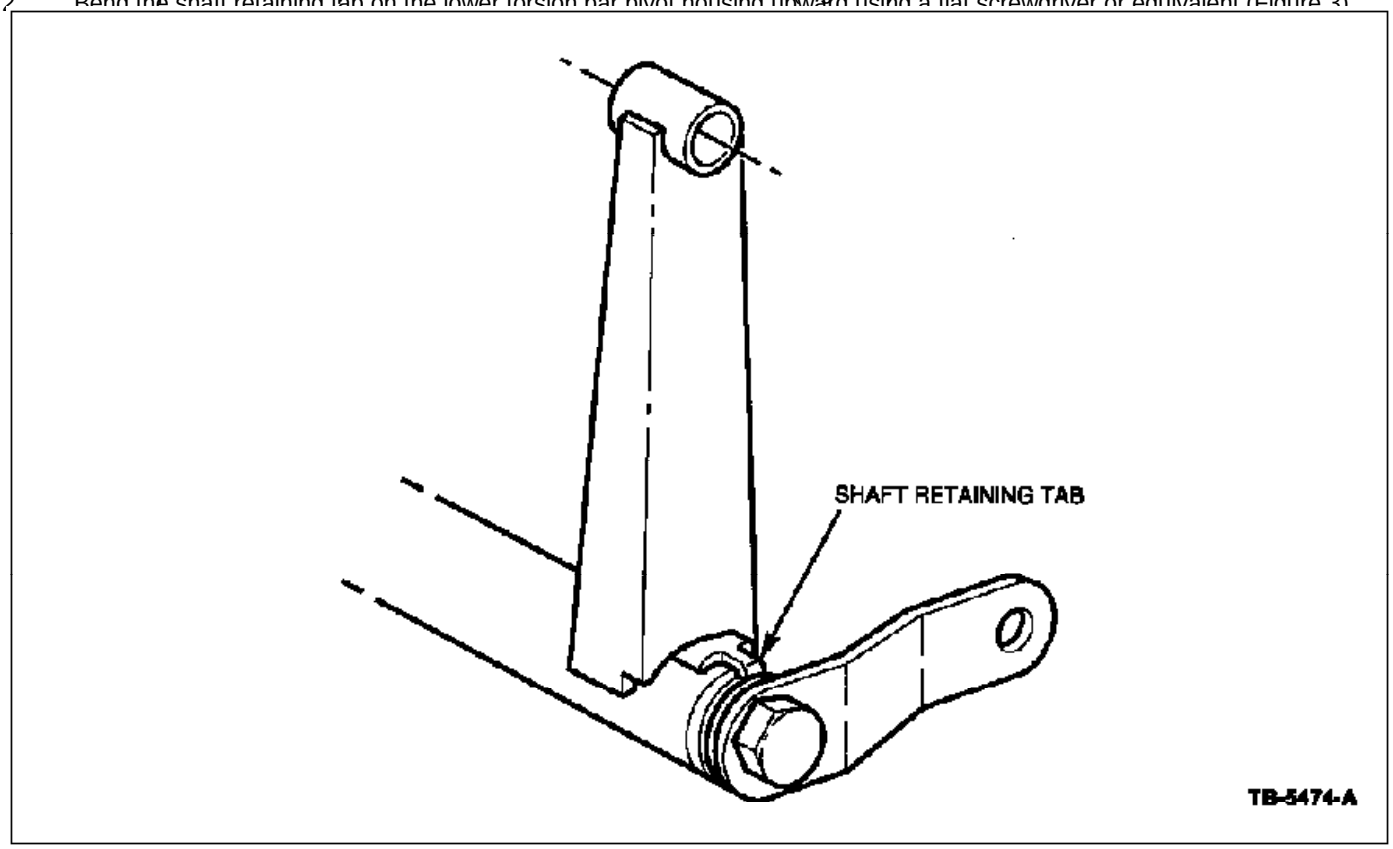


Figure 3 - Article 08-16-2

3. Slide the LH and RH U-link partially out of the housing. The bushing must remain seated in the housing.
4. [illegible] at

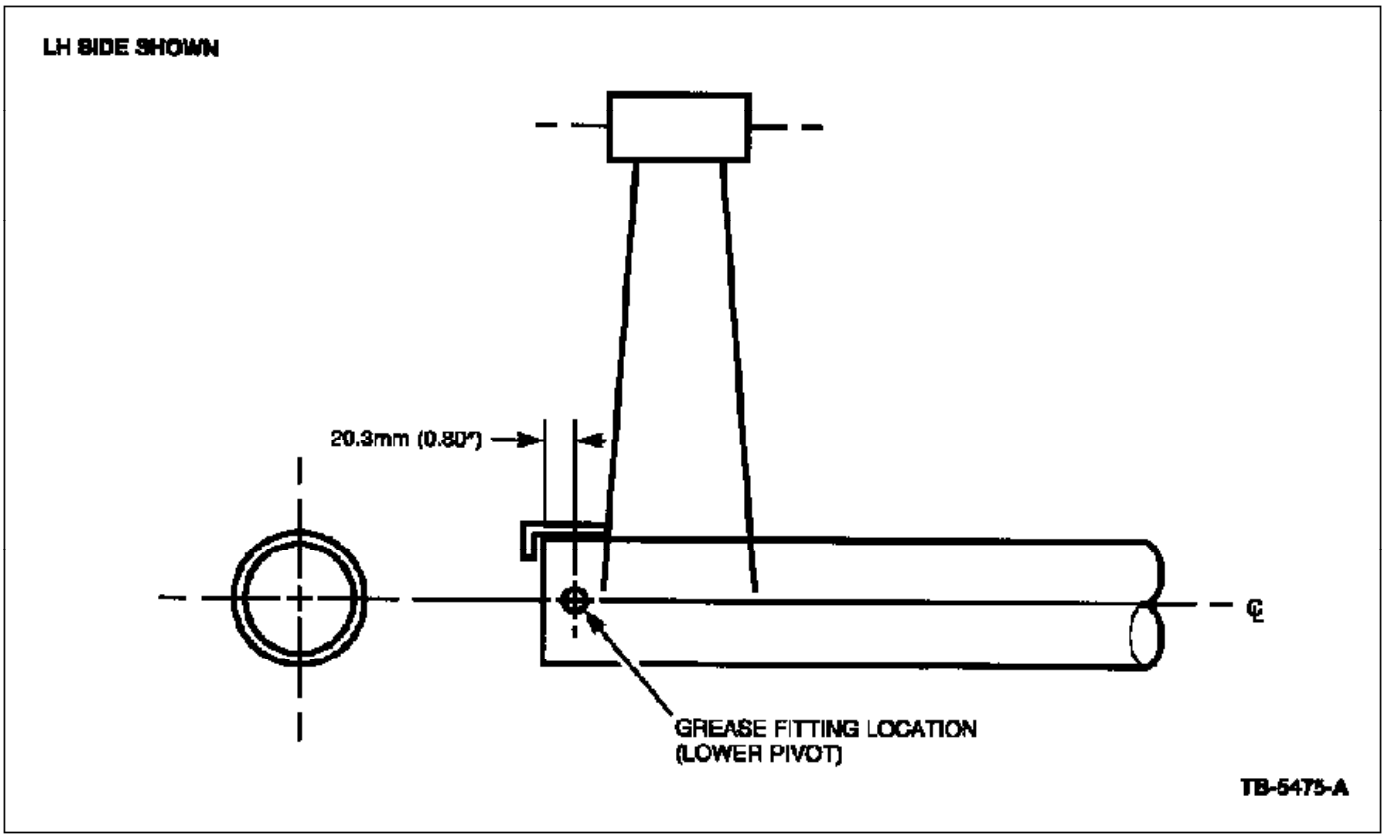


Figure 4 - Article 98-16-3

5: Obtain locally two (2) push-in grease fittings for a 3/16" hole and press the fittings into the drilled holes.
6: INSURE THAT WITH THE TORSION BAR DO NOT PROTRUDE PAST THE BUSHING AND INTO THE HOUSING CAVITY AND
7: Reassemble the hinge and Pivot assembly pivot bars.
8: Grease all four (4) fittings using Ford Premium Long Life Grease (XG-1-C or equivalent).

PART NUMBER	PART NAME
XC4Z-9016A778-AA	Hood Hinge Pivot Pin
XG-1-C	Ford Premium Long Life Grease

OTHER APPLICABLE ARTICLES: NONE

WARRANTY STATUS: Eligible Under Basic Warranty Coverage

LABOR ALLOWANCE

OPERATION	DESCRIPTION	TIME
981602AA	Replace Hinge Pins (101 BBC Vehicles)	0.4 Hr.
981602AB	Replace Hinge Pins And Install Grease Fittings (113 And 122 BBC Vehicles)	0.7 Hr.

DEALER CODING

BASIC PART NO.	CONDITION CODE
16800	42

CASIC CODES: 108000, 111000

Grille - Cracking Or Breaking Of Vertical Center Rib	Article No. 98-17-3

[illegible] TRUCK:
[illegible] material thickness of the vertical center rib. Grille side attachment brackets have no adjustment to [illegible] may be due to [illegible] the grille with a revised grille. Refer to the following Service Procedure for details.

SERVICE PROCEDURE
[illegible] UPPER and LOWER bright grille assembly. The following provides replacement part [illegible] failure modes.

UPPER Grille Assembly Failure Only
If the upper bright grille assembly is broken/cracked, replace with:

- (1 required) XC45-8150-FA Grille - Radiator Upper
- (4 required) XC45-8A125-AA Bracket - Radiator Grille Support

LOWER Grille Assembly Failure Only
If the lower bright grille assembly is broken/cracked, replace with:

- (1 required) XC45-8150-GA Grille - Radiator Lower
- (2 required) XC45-8A125-AA Bracket - Radiator Grille Support

BOTH Upper And Lower Grille Assembly Failure
If both upper and lower grille assemblies are broken/cracked, replace with:

- (1 required) XC45-8150-FA Grille - Radiator Upper
- (1 required) XC45-8150-GA Grille - Radiator Lower
- (6 required) XC45-8A125-AA Bracket - Radiator Grille Support

[illegible] CENTER FIT. LOOSEN THE BOLT ON THE LOWER
Refer to the appropriate year Louisville/AeroMax Workshop Manual for installation details.

PART NUMBER	PART NAME
XC45-8150-FA	Upper Radiator Grille
XC45-8150-GA	Lower Radiator Grille
XC45-8A125-AA	Radiator Grille Support Bracket (Refer To Service Procedure For Amount Required)

OTHER APPLICABLE ARTICLES: NONE
WARRANTY STATUS: Eligible Under Basic Warranty Coverage
LABOR ALLOWANCE

OPERATION	DESCRIPTION	TIME
981703AL	Replace Bright Grille Assembly (Lower)	0.6 Hr.
981703AT	Replace Bright Grille Assembly (Upper And Lower)	0.8 Hr.
981703AUP	Replace Bright Grille Assembly (Upper)	0.7 Hr.

DEALER CODING

BASIC PART NO.	CONDITION CODE
8150	42

BASIC CODES: 108000, 111000

Hood - Hood Restraint Cable Springs Rub On Hood - Vehicles Built Through 12/19/97	Article No. 98-17-5

MODELS AFFECTED
[illegible] MAXIMA, QUEST, VILLAGER
DESCRIPTION
[illegible] rubbing on the mounting bracket not allowing the springs to move rapidly enough to achieve the "park position" [illegible] and bracket which should reduce the possibility of the spring rubbing on the hood. Refer to the following Service [illegible]
SERVICE PROCEDURE
[illegible] spring as shown in Figures 1-3. Make sure the check springs are assembled as shown.

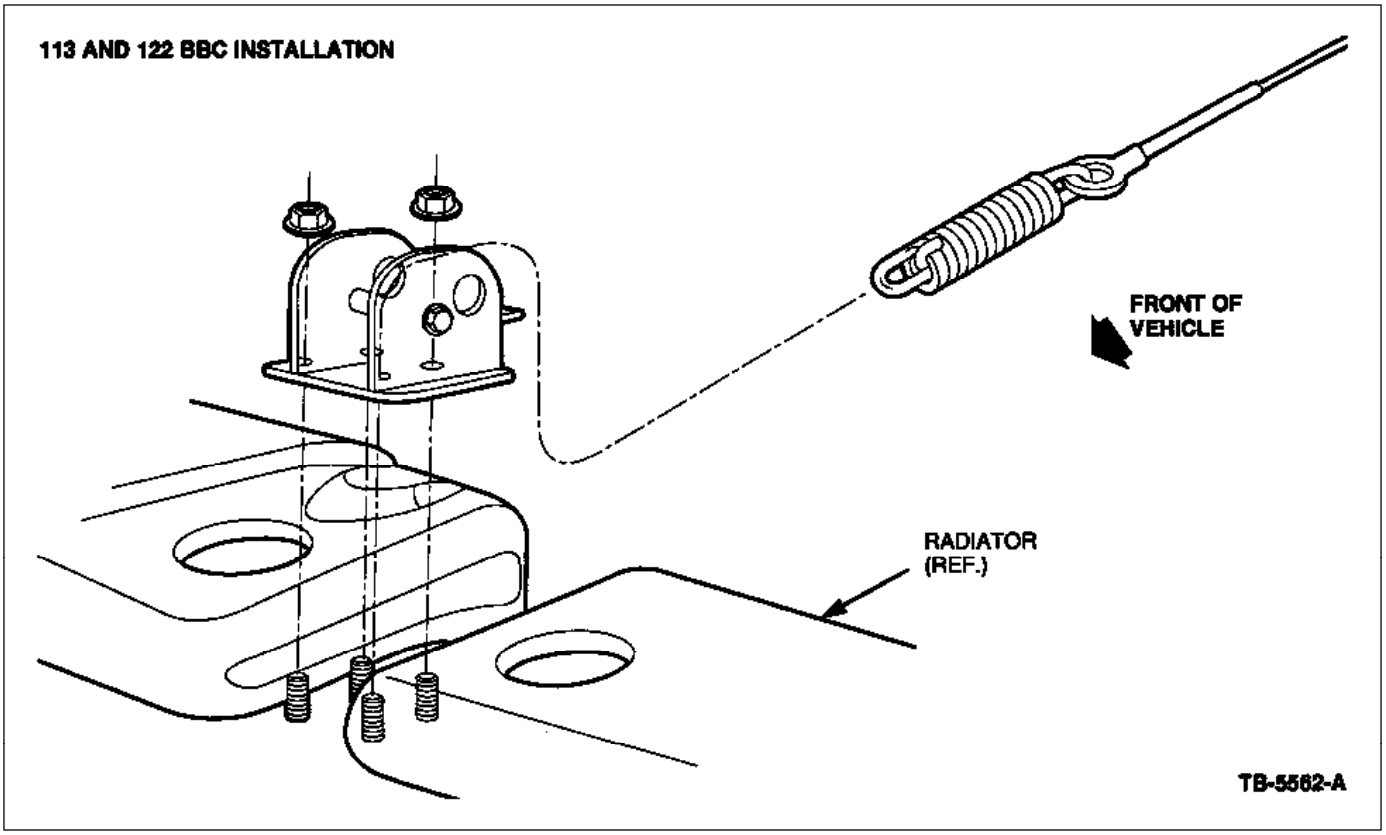


Figure 1 - Article 98-17-5

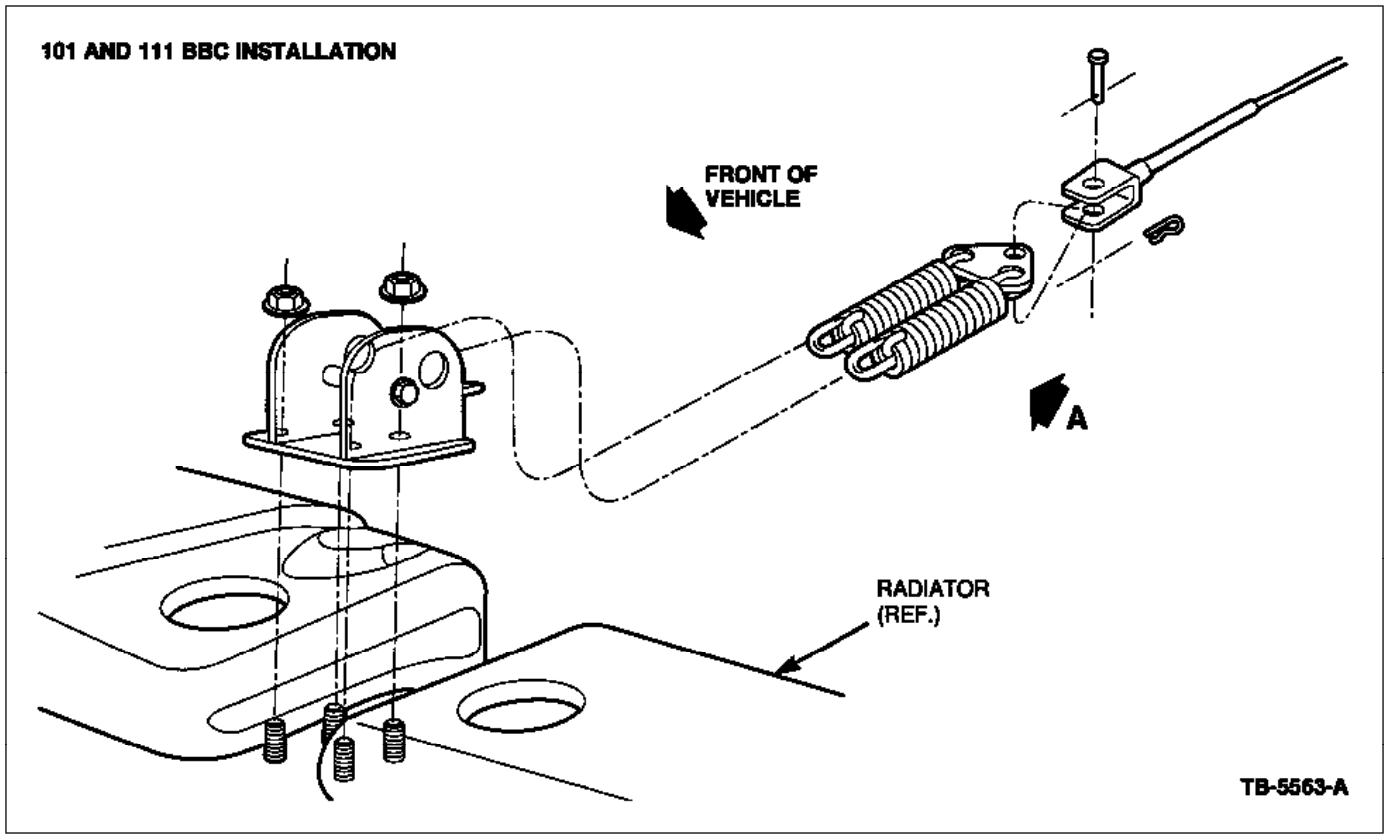


Figure 2 - Article 98-17-5

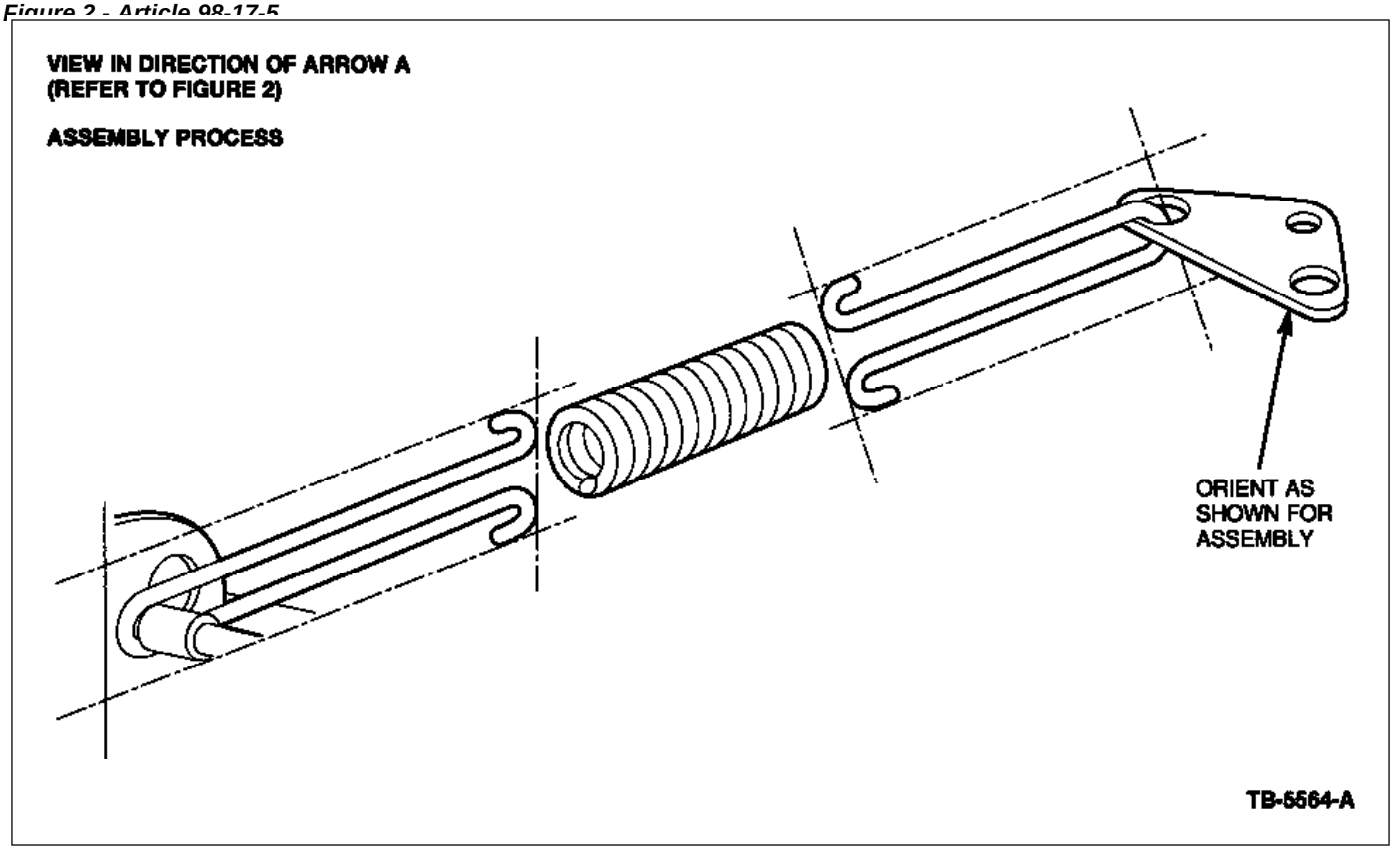


Figure 3 - Article 98-17-5

2. Torque bracket mounting nuts to 30-43 N-m (22-32 lb-ft).

PART NUMBER	PART NAME
XC45-16794-AA	Bracket - Hood Support

OTHER APPLICABLE ARTICLES: NONE

WARRANTY STATUS: Eligible Under Basic Warranty Coverage

OPERATION	DESCRIPTION	TIME
981705AT	Replace Bracket Assembly - Two (2) Springs	0.6 Hr.
981705A	Replace Bracket Assembly - One (1) Spring	0.5 Hr.

DEALER CODING

BASIC PART NO.	CONDITION CODE
16798	07

CASIS CODES - 111000, 120000, 402000, 409000

Dimmer Control - Instrument Panel Dimmer Switch Broken And/Or High Efforts To Operate	**Article No. 98-17-6**

APPLICABILITY: 1998 MAXVON/SVILLE

DESCRIPTION: Some vehicles may have a high driver side effort or broken switch slider. This may be caused by the

PART NUMBER	PART NAME
XC4T-13740-AA	Dimmer Switch

OTHER APPLICABLE ARTICLES: NONE

WARRANTY STATUS: Eligible Under Basic Warranty Coverage

LABOR ALLOWANCE

OPERATION	DESCRIPTION	TIME
981706A	Replace Dimmer Switch	0.4 Hr.

DEALER CODING

BASIC PART NO.	CONDITION CODE
13740	42

BASIC CODES: 201000, 201200, 202000, 204000

Steering - Re-center Clockspring Assembly	Article No. 98-17-10

MODELS: 1998 MAXIVAN ISUZU

SITUATION
If the steering wheel is removed before the steering wheel is installed completely and the clockspring hub is allowed to spin free, the clockspring must be re-centered before the steering wheel is installed.

ACTION
Perform the following Service Procedure to properly re-center the clockspring.

SERVICE PROCEDURE
DIRECTIONS TO RE-CENTER THE CLOCKSPRING ARE ALSO IDENTIFIED ON THE TOP OF THE CLOCKSPRING HUB.
Refer to Figure 1.

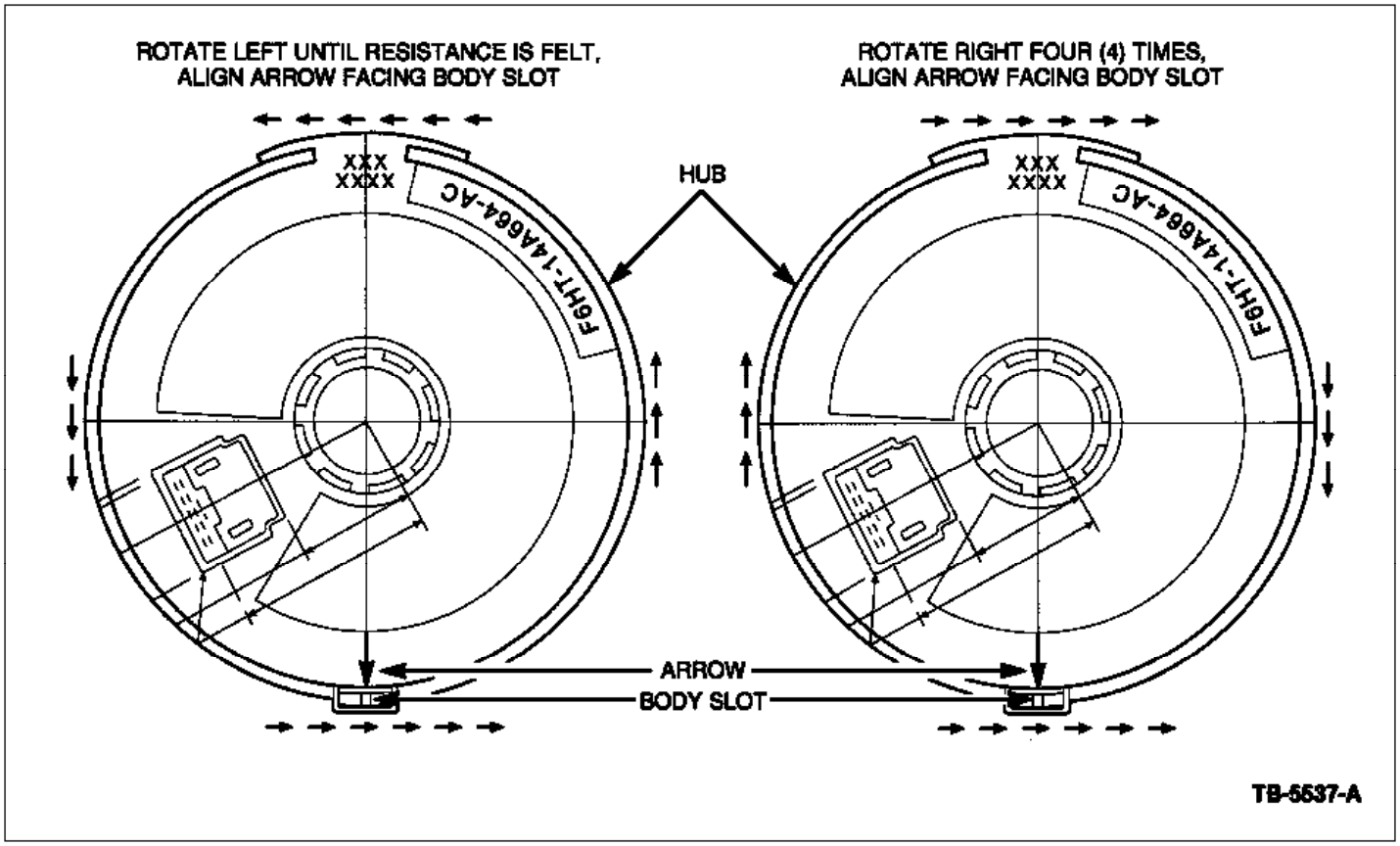


Figure 1 - Article 98-17-10

2. Use
a
b
3. Align
4. Depress
5. If
6. Install the steering wheel on the column, setting the clear vision as necessary. Torque the retaining nut to 61-88 N-m (45-65 felt.

OTHER APPLICABLE ARTICLES: NONE
WARRANTY STATUS: INFORMATION ONLY
CAMPAIGN ID#: 207000; 208000; 295000; 302000; 309000

Paint - Exterior - Worldwide Recommended Paint Materials For Warranty And After Warranty Repairs	**Article No. 98-18-2**

1997 AEROSTAR, CROWN VICTORIA, ESCORT, MUSTANG, TAURUS
1997 CONTINENTAL, GRAND MARQUIS, MARK VIII, MYSTIQUE, SABLE, TOWN CAR, TRACER
1997 EXPEDITION, EXPLORER, F SUPER DUTY, F-150-350 SERIES, F-47, MOUNTAINEER, RANGER, VILLAGER,
1998 WINDSTAR
WORLDWIDE VANS AND CO SERIES, E & B SERIES, L SERIES, LOUISVILLE

THIS TSR article is being republished in its entirety to add additional paint information.

Ford Motor Company materials that are used for warranty. Tests conducted were designed around OEM Refinish Material Reliability and testing refinish paint systems. These paint systems are used for refinishing service parts as well as repair steel and

SYSTEMS TESTED

European VOC (Volatile Organic Compounds) regulations

NEW FINISH SYSTEMS WILL BEGIN 9/98 DUE TO A RECENT MORATORIUM REQUIRING

SELECTION AND PREPARATION

All testing was completed at the Ford Central Laboratory facility.

SUBSTRATES AND TESTS

the specifications. Each panel was tested and reviewed per OEM testing methods.

PAINT PRODUCT CHANGES

once a year. Cost of testing will be the responsibility of the paint suppliers.

APPROVED SUPPLIERS AND MATERIALS

rubber/paint company contractual agreements should only contract with recommended suppliers when existing contracts

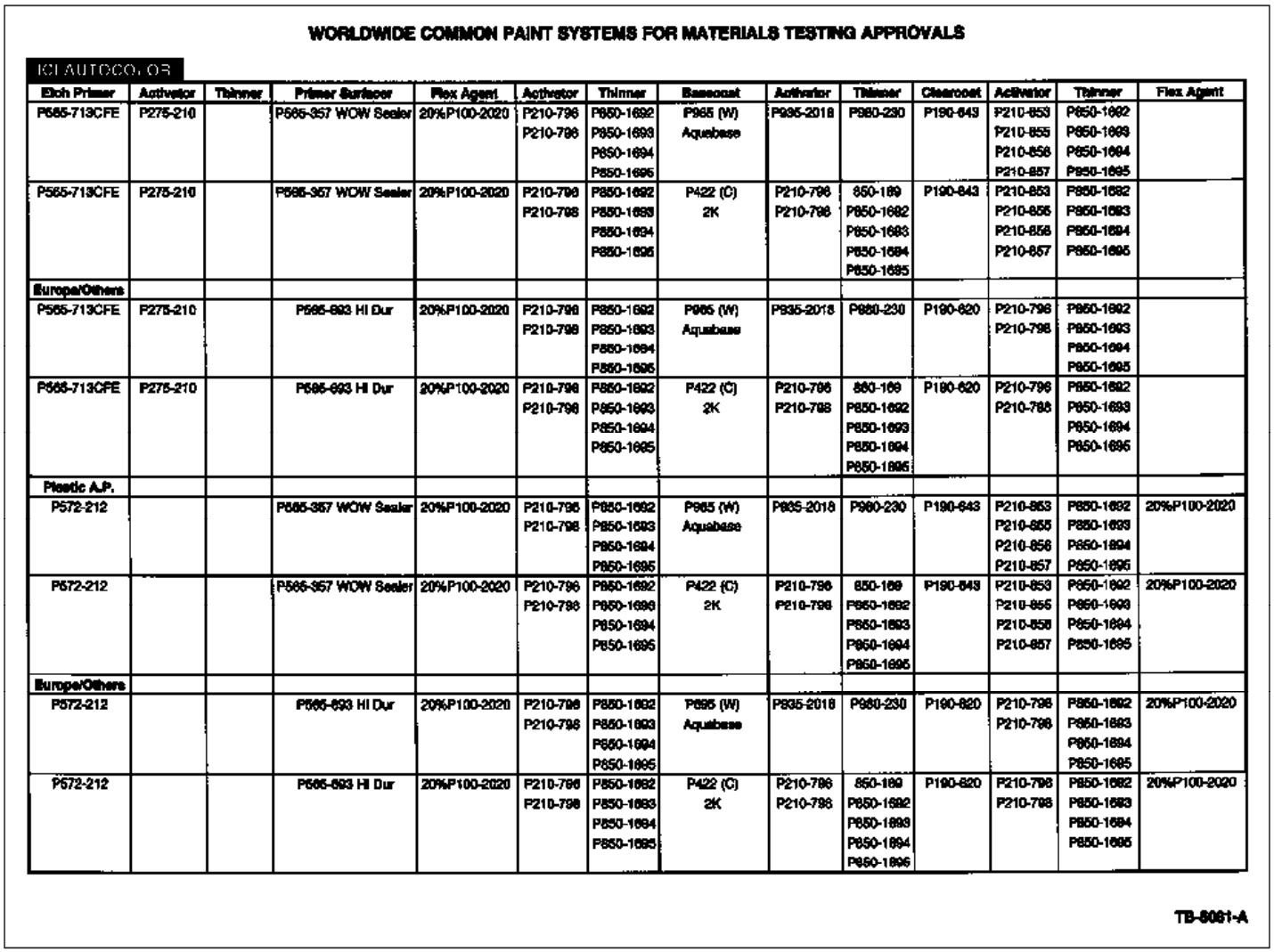
WORLDWIDE COMMON PAINT SYSTEMS FOR MATERIALS TESTING APPROVALS

DUPONT

Etch Primer	Activator	Thinner	Primer Surfacer	Flex Agent	Activator	Thinner	Basecoat	Activator	Thinner	Clearcoat	Activator	Thinner	Flex Agent
United States													
615S	614S 616S		1120S 1140S		1125S	1130S 1135S	ChromaBase	12305S	7165S 7165S 7175S 7185S 7195S	7800S		7875S 7895S 7899S	
615S	614S 616S		1120S 1140S		1125S	1130S 1135S	ChromaPremier	12305S	7155S 7165S 7175S 7185S 7195S	72200S	12305S	12365S 12375S 12385S	
Canada													
810R	815R		1020R 1044R		125S	1025R 1055R	ChromaBase	12305S	7155S 7165S 7175S 7185S 7195S	8500S	8525S	8570S 8580S	
810R	815R		1020R 1044R		125S	1025R 1055R	ChromaPremier	12305S	7155S 7165S 7175S 7185S 7195S	72200S	12305S	12365S 12375S 12385S	
Plastic													
United States													
Adhesion Promoter			**Primer**										
2322S			2340S		12305S	1075S 12365S	ChromaBase	12305S	7155S 7165S 7175S 7185S 7195S	7800S		7875S 7895S 7899S	2350S
Canada													
800R			2340S		12305S	12385S	ChromaBase	12305S	7155S 7165S 7175S 7185S 7195S	8500S	8525S	8570S 8580S	805R

TB-5090-A

Figure 1 - Article 98-18-2



WORLDWIDE COMMON PAINT SYSTEMS FOR MATERIALS TESTING APPROVALS

ICI AUTOCOLOR

Etch Primer	Activator	Thinner	Primer Surfacer	Flex Agent	Activator	Thinner	Basecoat	Activator	Thinner	Clearcoat	Activator	Thinner	Flex Agent
P565-713CFE	P275-210		P565-357 WOW Sealer	20%P100-2020	P210-796 P210-798	P850-1692 P850-1693 P850-1694 P850-1695	P965 (W) Aquabase	P935-2018	P980-230	P190-643	P210-853 P210-855 P210-856 P210-857	P850-1692 P850-1693 P850-1694 P850-1695	
P565-713CFE	P275-210		P565-357 WOW Sealer	20%P100-2020	P210-796 P210-798	P850-1692 P850-1693 P850-1694 P850-1695	P422 (C) 2K	P210-796 P210-798	850-189 P850-1692 P850-1693 P850-1694 P850-1695	P190-643	P210-853 P210-855 P210-856 P210-857	P850-1692 P850-1693 P850-1694 P850-1695	
Europe/Others													
P565-713CFE	P275-210		P565-693 HI Dur	20%P100-2020	P210-796 P210-798	P850-1692 P850-1693 P850-1694 P850-1695	P965 (W) Aquabase	P935-2018	P980-230	P190-620	P210-796 P210-798	P850-1692 P850-1693 P850-1694 P850-1695	
P565-713CFE	P275-210		P565-693 HI Dur	20%P100-2020	P210-796 P210-798	P850-1692 P850-1693 P850-1694 P850-1695	P422 (C) 2K	P210-796 P210-798	850-189 P850-1692 P850-1693 P850-1694 P850-1695	P190-620	P210-796 P210-798	P850-1692 P850-1693 P850-1694 P850-1695	
Plastic A.P.													
P572-212			P565-357 WOW Sealer	20%P100-2020	P210-796 P210-798	P850-1692 P850-1693 P850-1694 P850-1695	P965 (W) Aquabase	P935-2018	P980-230	P190-643	P210-853 P210-855 P210-856 P210-857	P850-1692 P850-1693 P850-1694 P850-1695	20%P100-2020
P572-212			P565-357 WOW Sealer	20%P100-2020	P210-796 P210-798	P850-1692 P850-1693 P850-1694 P850-1695	P422 (C) 2K	P210-796 P210-798	850-189 P850-1692 P850-1693 P850-1694 P850-1695	P190-643	P210-853 P210-855 P210-856 P210-857	P850-1692 P850-1693 P850-1694 P850-1695	20%P100-2020
Europe/Others													
P572-212			P565-693 HI Dur	20%P100-2020	P210-796 P210-798	P850-1692 P850-1693 P850-1694 P850-1695	P965 (W) Aquabase	P935-2018	P980-230	P190-620	P210-796 P210-798	P850-1692 P850-1693 P850-1694 P850-1695	20%P100-2020
P572-212			P565-693 HI Dur	20%P100-2020	P210-796 P210-798	P850-1692 P850-1693 P850-1694 P850-1695	P422 (C) 2K	P210-796 P210-798	850-189 P850-1692 P850-1693 P850-1694 P850-1695	P190-620	P210-796 P210-798	P850-1692 P850-1693 P850-1694 P850-1695	20%P100-2020

TB-8061-A

Figure 2 - Article 98-18-2

WORLDWIDE COMMON PAINT SYSTEMS FOR MATERIALS TESTING APPROVALS

PPG

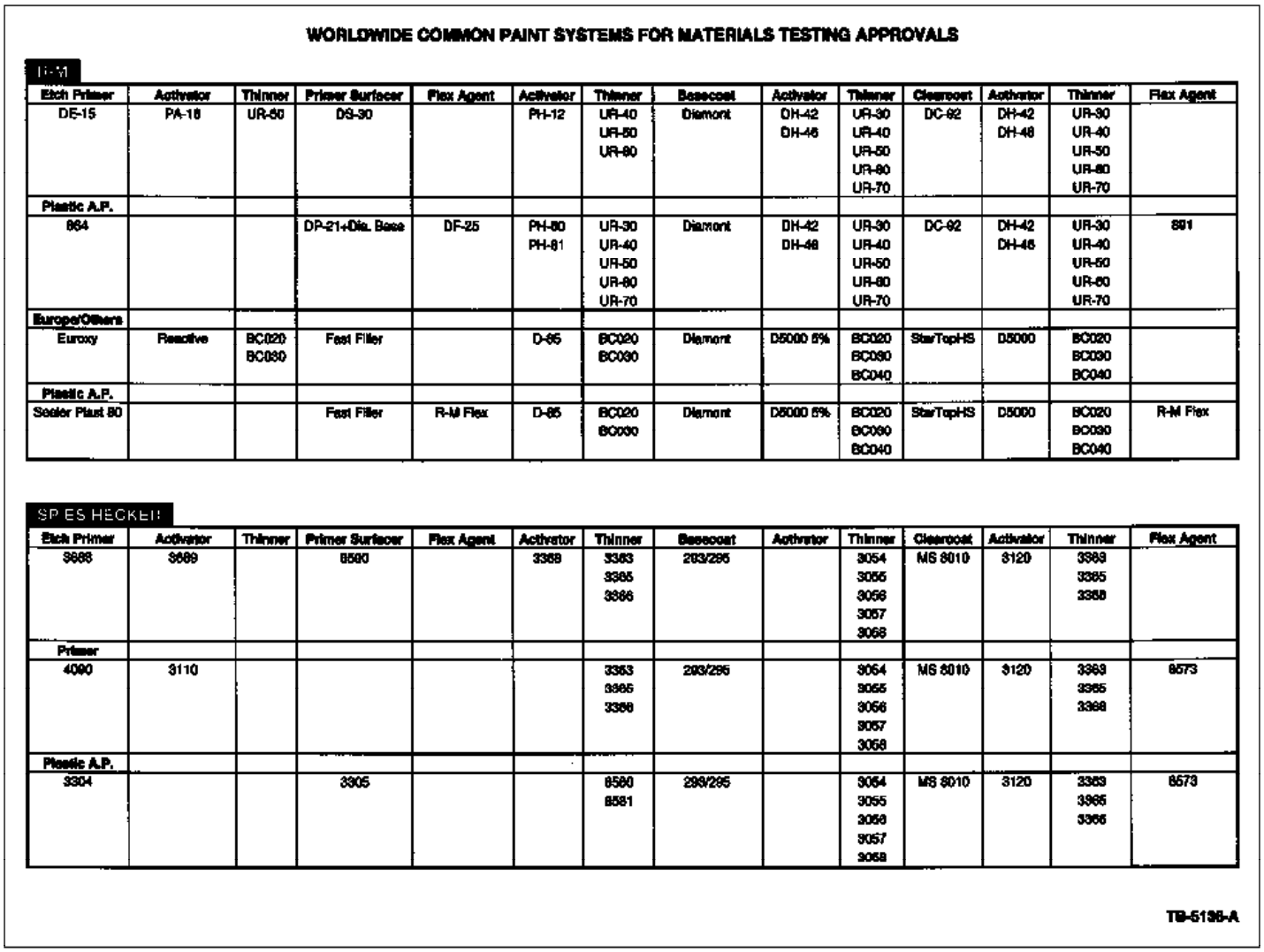
Etch Primer	Activator	Thinner	Primer Surfacer	Flex Agent	Activator	Thinner	Basecoat	Activator	Thinner	Clearcoat	Activator	Thinner	Flex Agent
North America													
DX1791	DX1792		NCP270		NCX275		DBC	5%DX57	DT860 DT870 DT885 DT895 DT898 DT8110	DCU2002	DCX8	DT860 DT870 DT885 DT895 DT898 DT8110	
Europe/Others													
Global/Delfron													
D831	D832		D822		D828	D807 D808 D812 D869 D870 D871 D872 D873	Global BC	5%D888	D807 D808 D812 D869 D870 D871 D872 D873	D894	D884	D807 D808 D812 D869 D870 D871 D872 D873	
Plastic A.P.													
North America													
DPX801							DBC	5%DX57	DT860 DT870 DT885 DT895 DT898 DT8110	DCU2002	DCX8	DT860 DT870 DT885 DT895 DT898 DT8110	DX814
Europe/Others													
Global/Delfron													
D820							Global BC	5%D888	D807 D808 D812 D869 D870 D871 D872 D873	D894	D884	D807 D808 D812 D869 D870 D871 D872 D873	D814

GLASURIT

Etch Primer	Activator	Thinner	Primer Surfacer	Flex Agent	Activator	Thinner	Basecoat	Activator	Thinner	Clearcoat	Activator	Thinner	Flex Agent
North America													
801-1552	965-32/2	352-50 352-91 352-216	285-50		929-28/2 929-71 929-73	352-50 352-91 352-216	L55	355-55	352-50 352-91 352-216	923-94	929-81 929-83 929-84	352-50 352-91 352-216	
Europe													
			285-16		929-28/2	352-50 352-91	L55	355-55	352-50 352-91 352-216	923-94	929-81 929-83 929-84	351-50 352-91 352-216	
Plastic A.P.													
934-0			285-50	521-111	929-28/2	352-50 352-91 352-216	L55	355-55	352-50 352-91 352-216	923-94	929-81 929-83 929-84	352-50 352-91 352-216	521-111

TB-5135-B

Figure 3 - Article 98-18-3



WORLDWIDE COMMON PAINT SYSTEMS FOR MATERIALS TESTING APPROVALS

R-M

Etch Primer	Activator	Thinner	Primer Surfacer	Flex Agent	Activator	Thinner	Basecoat	Activator	Thinner	Clearcoat	Activator	Thinner	Flex Agent
DE-15	PA-16	UR-50	DS-30		PH-12	UR-40 UR-50 UR-60	Diamont	DH-42 DH-46	UR-30 UR-40 UR-50 UR-60 UR-70	DC-92	DH-42 DH-46	UR-30 UR-40 UR-50 UR-60 UR-70	
Plastic A.P.													
864			DP-21+Dia. Base	DF-25	PH-80 PH-81	UR-30 UR-40 UR-50 UR-60 UR-70	Diamont	DH-42 DH-46	UR-30 UR-40 UR-50 UR-60 UR-70	DC-92	DH-42 DH-46	UR-30 UR-40 UR-50 UR-60 UR-70	891
Europe/Others													
Euroxy	Reactive	BC020 BC030	Fast Filler		D-65	BC020 BC030	Diamont	D5000 5%	BC020 BC030 BC040	StarTopHS	D5000	BC020 BC030 BC040	
Plastic A.P.													
Sealer Plast 80			Fast Filler	R-M Flex	D-65	BC020 BC030	Diamont	D5000 5%	BC020 BC030 BC040	StarTopHS	D5000	BC020 BC030 BC040	R-M Flex

SPIES HECKER

Etch Primer	Activator	Thinner	Primer Surfacer	Flex Agent	Activator	Thinner	Basecoat	Activator	Thinner	Clearcoat	Activator	Thinner	Flex Agent
3688	3689		8580		3368	3363 3365 3366	293/295		3054 3055 3056 3057 3058	MS 8010	3120	3363 3365 3368	
Primer													
4090	3110					3363 3365 3366	293/295		3054 3055 3056 3057 3058	MS 8010	3120	3363 3365 3368	8573
Plastic A.P.													
3304			3305			8580 8581	293/295		3054 3055 3056 3057 3058	MS 8010	3120	3363 3365 3366	8573

TB-5136-A

Figure 4 - Article 98.18.2

WORLDWIDE COMMON PAINT SYSTEMS FOR MATERIALS TESTING APPROVALS

SIKKENS

Etch Primer	Activator	Thinner	Primer Surfacer	Activator	Thinner	Basecoat	Activator	Thinner	Clearcoat	Activator	Thinner	Flex Agent
Wash Primer CR	Wash Hardener		Colorbuild +33% Elast-o-Actif	Colorbuild Primer Surfacer Activator	Colorbuild Primer Surfacer Hardener	Autobase +10% Elast-o-Actif	Autocryl Hardener Autobase Atomizing Agent	Autobase Reducer Slow	Autoclear II	Autocryl Hardener	Autocryl Reducer Slow	+33% Elast-o-Actif
Plastic A.P.												
Primer PO			Colorbuild +33% Elast-o-Actif	Colorbuild Primer Surfacer Activator	Colorbuild Primer Surfacer Hardener	Autobase +10% Elast-o-Actif	Autocryl Hardener Autobase Atomizing Agent	Autobase Reducer Slow	Autoclear II	Autocryl Hardener	Autocryl Reducer Slow	+33% Elast-o-Actif
Europe/Others												
Washer Primer CR	Wash Hardener		Autocryl Filler Off-White +50% Elast-o-Actif	1.2.3 Hardener	1.2.3 Reducer Slow	Autobase +10% Elast-o-Actif	1.2.3 Hardener	1.2.3 Reducer Slow	Autoclear MS 3000	Autocryl Hardener MS 30	1.2.3 Reducer Slow	+33% Elast-o-Actif
Plastic A.P.												
Primer PO			Autocryl Filler Off-White +50% Elast-o-Actif	1.2.3 Hardener	1.2.3 Reducer Slow	Autobase +10% Elast-o-Actif	1.2.3 Hardener	1.2.3 Reducer Slow	Autoclear MS 3000	Autocryl Hardener MS 30	1.2.3 Reducer Slow	+33% Elast-o-Actif

STANDOX

Etch Primer	Activator	Thinner	Primer Surfacer	Activator	Thinner	Basecoat	Activator	Thinner	Clearcoat	Activator	Thinner	Flex Agent
Standox Etching Adhesion Primer	Standox Etching Adhesion Activator		Standox 2K 4:1 Special Filler	Standox 2K MS Special Hardener	Standox Universal Thinner 11012	Standox MSB Basecoat	Standox MS Special Hardener	Standox MSB Thinner 11050	Standox 2K MS Clear	Standox 2K Low VOC Hardener	Standox Universal Thinner 11012	
Standoflex 1K Plastic Primer		Standoflex Thinner 11100	Standoflex 1K Plastic Filler Grey		Standoflex Thinner 11100	Standox MSB Basecoat	Standox MS Special Hardener	Standox MSB Thinner 11050	Standox 2K MS Clear	Standox MS Special Hardener	Standox Universal Thinner 11012	Standox 2K Plasticiser

TB-6471-A

Figure 5 - Article 98.18.2

WORLDWIDE COMMON PAINT SYSTEMS FOR MATERIALS TESTING APPROVALS

SHERWIN WILLIAMS **PLASTIC SYSTEMS**

Plastic Primer	Activator	Thinner	Primer Surfacer	Flex Agent	Activator	Thinner	Basecoat	Activator	Thinner	Clearcoat	Activator	Thinner	Flex Agent
Canada													
UPO7226 UPO7227			P6A47	V2V299	V6V79	US-1 US-2 US-3 US-4 US-5	Ultra 7000 BC	UH-80	BCS600 BCS605 BCS610	CC635	UH80	US-1 US-2 US-3 US-4 US-5	

SHERWIN WILLIAMS **METAL SYSTEMS**

Etch Primer	Activator	Thinner	Primer Surfacer	Flex Agent	Activator	Thinner	Basecoat	Activator	Thinner	Clearcoat	Activator	Thinner	Flex Agent
South America and Others													
E2G963 with W4K269	R7K981 R7K982 R7K985		P6A47	V2V299	V6V79	US-1 US-2 US-3 US-4 US-5	Ultra 7000 BC	UH-80	BCS600 BCS605 BCS610	CC635	UH80	US-1 US-2 US-3 US-4 US-5	

SHERWIN WILLIAMS **PLASTIC SYSTEMS**

Plastic Primer	Activator	Thinner	Primer Surfacer	Flex Agent	Activator	Thinner	Basecoat	Activator	Thinner	Clearcoat	Activator	Thinner	Flex Agent
South America and Others													
UPO7226 UPO7227			P6A47	V2V299	V6V79	US-1 US-2 US-3 US-4 US-5	Ultra 7000 BC	UH-80	BCS600 BCS605 BCS610	CC635	UH80	US-1 US-2 US-3 US-4 US-5	

TB-5609-A

Figure 6 - Article 98-18-2

WORLDWIDE COMMON PAINT SYSTEMS FOR MATERIALS TESTING APPROVALS

MARTIN SENOUR **METAL SYSTEMS**

Etch Primer	Activator	Thinner	Primer Surfacer	Flex Agent	Activator	Thinner	Basecoat	Activator	Thinner	Clearcoat	Activator	Thinner	Flex Agent
United States													
8847 with 8877	8848 8849 8845		5103	3084	5150	TS-1 TS-2 TS-3 TS-4 TS-5	Tec/BASE	8876	8880 8882 8881	8889	8876	TS-1 TS-2 TS-3 TS-4 TS-5	

MARTIN SENOUR **PLASTIC SYSTEMS**

Plastic Primer	Activator	Thinner	Primer Surfacer	Flex Agent	Activator	Thinner	Basecoat	Activator	Thinner	Clearcoat	Activator	Thinner	Flex Agent
United States													
6246 6247			5103	3084	5150	TS-1 TS-2 TS-3 TS-4 TS-5	Tec/BASE	8876	8880 8882 8881	8889	8876	TS-1 TS-2 TS-3 TS-4 TS-5	

TB-5610-A

Figure 7 - Article 98-18-2

CONCLUSIONS

finish materials will raise standards for these materials. These improved standards will result in improved customer

ARTICLES: NONE

INFORMATION ONLY

Suspension - Punctured Rear Suspension Spring - Vehicles Built Through 12/19/97	Article No. 98-18-6

MODELS: MAXVON/SVILLE

Figure 1: Locking tab

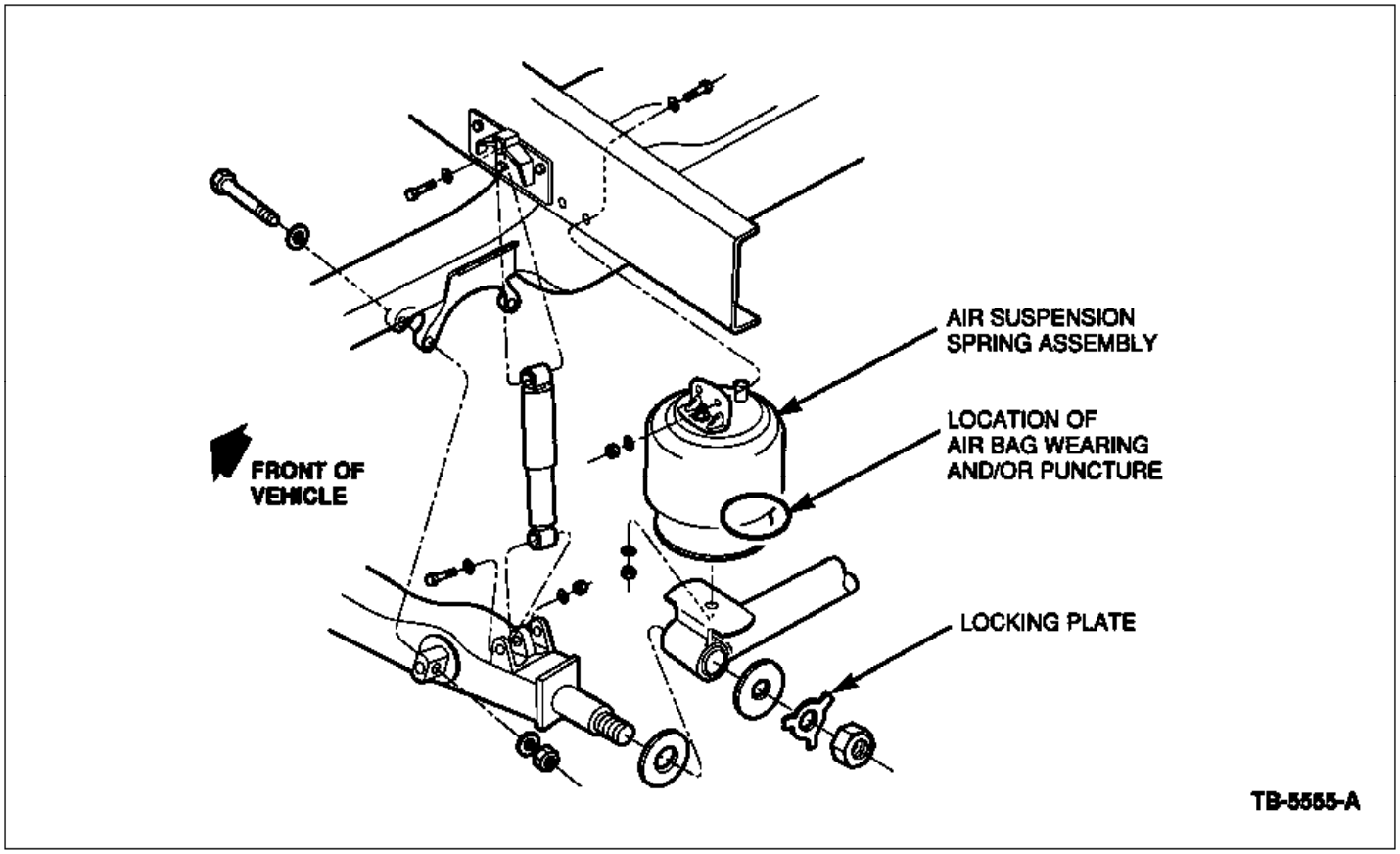


Figure 1 - Article 98-18-6

FRONT STUD MAY CAUSE AIR

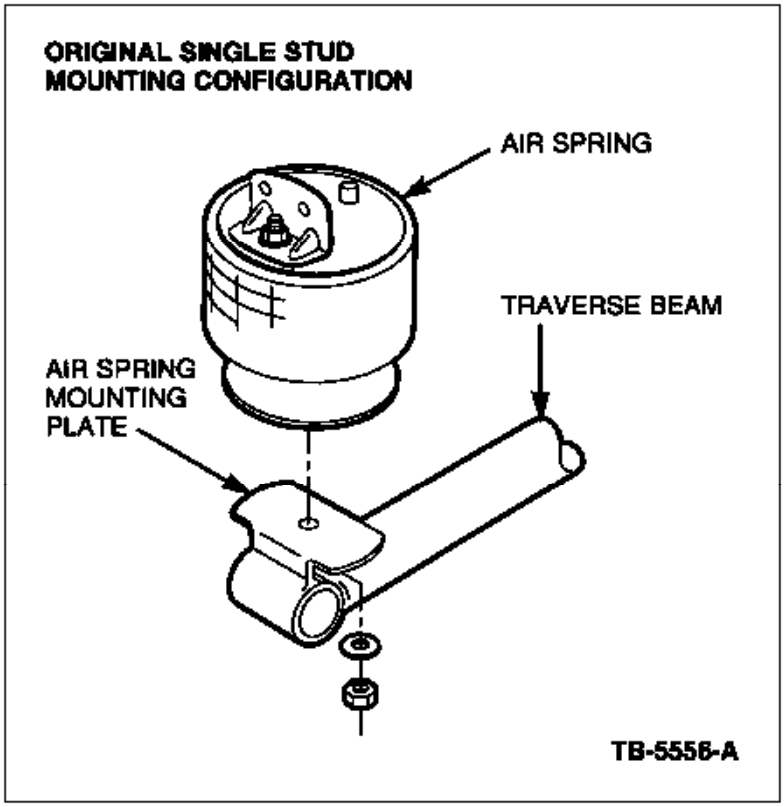


Figure 2 - Article 98-18-6

CONFIGURATION
RING MOUNTING PLATE IS MODIFIED, IT WILL ACCEPT BOTH SINGLE AND "TWO STUD" AIR SPRING
Refer to the 1996 Liquiville/AeroMax Service Manual, Page 04.02E-11,
Illustration 2). The new Parts Group kit is Part
mounting hardware. Convert to the "two stud" configuration (Figure 4). All three (3) tabs of the locking plate MUST be bent over flat on the

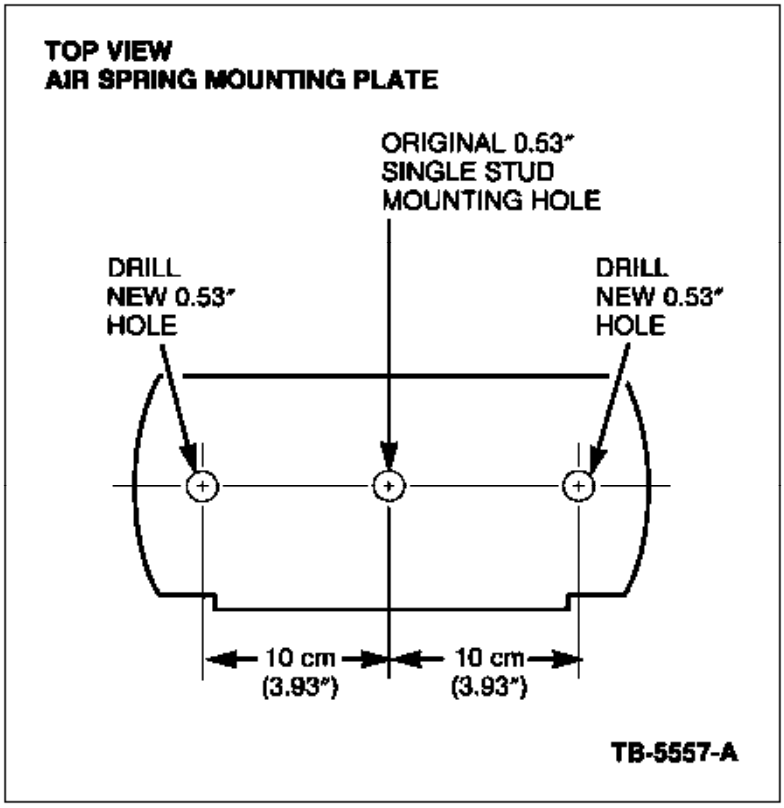


Figure 3 - Article 98-18-6

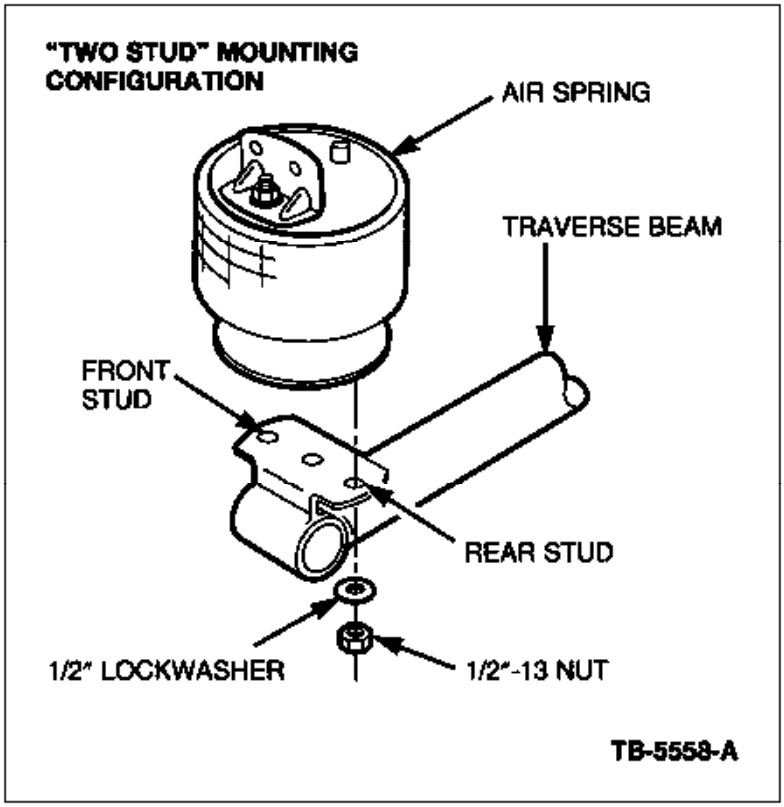


Figure 4 - Article 98-18-6

PART NUMBER	PART NAME
XC45-5580-AA	Rear Suspension Air Spring
F6HT-17C797-AA	Locking Plate

OTHER APPLICABLE ARTICLES: NONE
WARRANTY STATUS: Eligible Under Basic Warranty Coverage
LABOR ALLOWANCE

OPERATION	DESCRIPTION	TIME
981806AB	Replace Air Spring (Three)	1.2 Hrs.
981806AC	Replace Air Spring (Four)	1.5 Hrs.
981806AE	Replace Air Spring (One Each Side)	0.9 Hr.
981806ATA	Replace Air Spring (All One Side)	0.9 Hr.
981806A	Replace Air Spring (One)	0.6 Hr.
981806BC	Additional Time To Modify Air Spring Mounting Plate (Four)	0.9 Hr.
981806BE	Additional Time To Modify Air Spring Mounting Plate (One)	0.3 Hr.
981806BF	Additional Time To Modify Air Spring Mounting Plate (Two)	0.5 Hr.
981806BG	Additional Time To Modify Air Spring Mounting Plate (Three)	0.7 Hr.
981806CC	Additional Time To Replace Locking Plate - Includes Time To Bend Tabs (Four)	0.6 Hr.
981806CE	Additional Time To Replace Locking Plate - Includes Time To Bend Tabs (One)	0.2 Hr.
981806CF	Additional Time To Replace Locking Plate - Includes Time To Bend Tabs (Two)	0.3 Hr.
981806CG	Additional Time To Replace Locking Plate - Includes Time To Bend Tabs (Three)	0.4 Hr.
981806DC	Additional Time To Bend Locking Plate Tabs (Four)	0.2 Hr.
981806DE	Additional Time To Bend Locking Plate Tabs (One)	0.1 Hr.
981806DF	Additional Time To Bend Locking Plate Tabs (Two)	0.1 Hr.
981806DG	Additional Time To Bend Locking Plate Tabs (Three)	0.2 Hr.

DEALER CODING

BASIC PART NO.	CONDITION CODE
5580	12

CASIC CODES - 110000

Bulletin Contents

TSB Article 98-10-1 has been superseded by Article 98-24-3.
Press [Continue] to view Article 98-24-3.

• **Electrical - Various Intermittent Concerns - Low Coolant Level Sensor Leaking Coolant Into Wiring Harness** • **Cooling System - Leak - Low Coolant Level Sensor Leaking Coolant Into Wiring Harness**	**Article No. 98-20-1**

[illegible] ONISVILLE
[illegible] e only applies to 5.9L, 8.3L, CAT 3126, CAT 3306C, and CAT 3406C on Louisville/AeroMax models and 5.9L and 8.3L on [illegible] with low coolant level sensor leaking coolant into the attached wire harness and may also into wire connectors. These may be [illegible] Refer to the following Owner Assisted Procedure and this Service Bulletin for [illegible] sheet with the procedure of how to install the connector. Use the service procedure to determine what [illegible] ROCEDURE OR SPLICED USING FORD APPROVED [illegible] WIRE HARNESSES IN TSB «98-11-3».

SERVICE PROCEDURE - CARGO

1. [illegible] sor located above the radiator on the side or top of the coolant reservoir (Figure 1). Replace

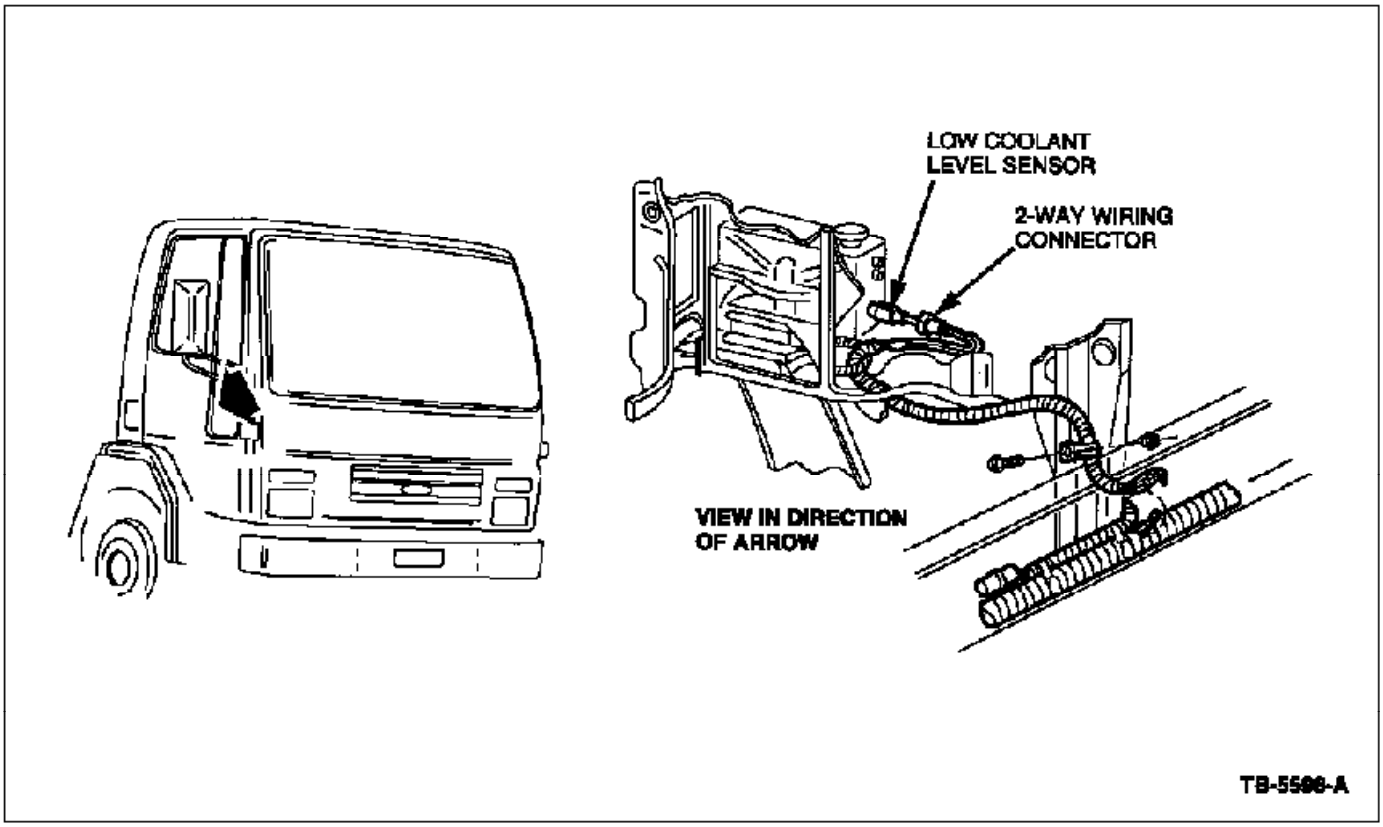


Figure 1 - Article 98-20-1

Procedure: Disconnect the wire harness connector from the low coolant level sensor.
[illegible] 968-AA).
2. [illegible] nect the 2-way wiring connector to the low coolant level sensor (Figure 1).
Procedure: The 2-way wiring connector should be disconnected from the low coolant level sensor.
[illegible] e following scenarios:
1) Is there a greenish coating formed on either of the 2 terminals?
- [illegible] wiring connector to the other end of service jumper harness. Go to Step 3.
- If no: go to Step 2b. 2) immediately following
2) Is there a visible liquid presence of ethylene glycol (coolant)?
- [illegible] end of service jumper harness. Go to Step 3.
- If no: Connect the existing 2-way wiring connector to the other end of service jumper harness. Go to Step 3.

3. [illegible] 4398- and -14401- wire harnesses located forward of the chassis

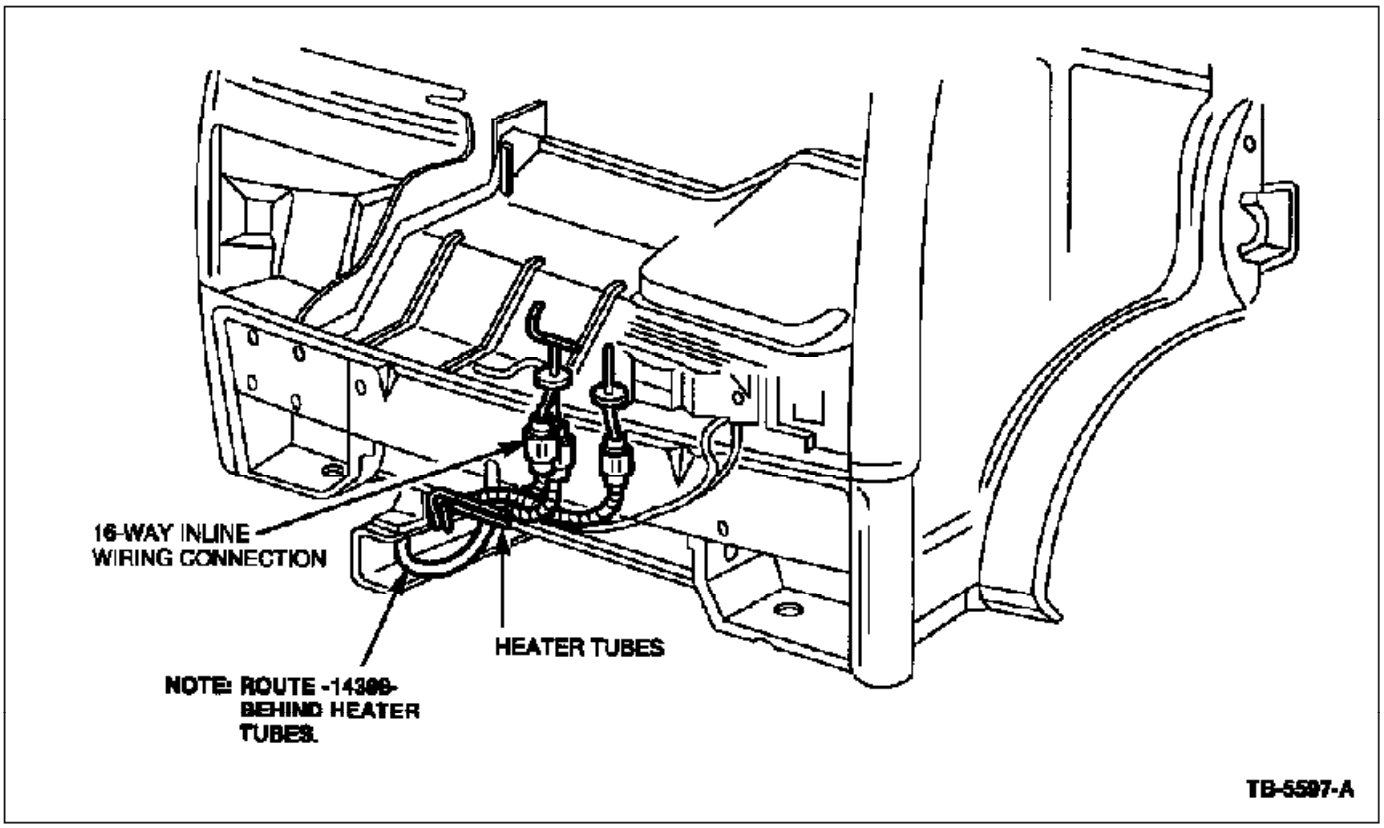


Figure 2 Article 98-20-1

Procedure:

1) Is there a greenish coating or corrosion formed on any of the 16 terminals in each male or female connector?

- If yes: Replace the connector using Ford Service Connector Kit (F5HT-19K271-DBA). Go to Step 4.
- If no: Go to Step 3a. 2) immediately following

2) Is there a visible liquid presence of ethylene glycol (coolant)?

- Dry out the connectors using a high pressure air hose. Reconnect the existing 16-way inline connectors. Go to Step 4.
- If no: Reconnect the existing 16-way inline wiring connectors. Do not continue. Operation complete.

4. inline wiring connection between the -14398- and -14405- wire harnesses, located on the RH rear chassis

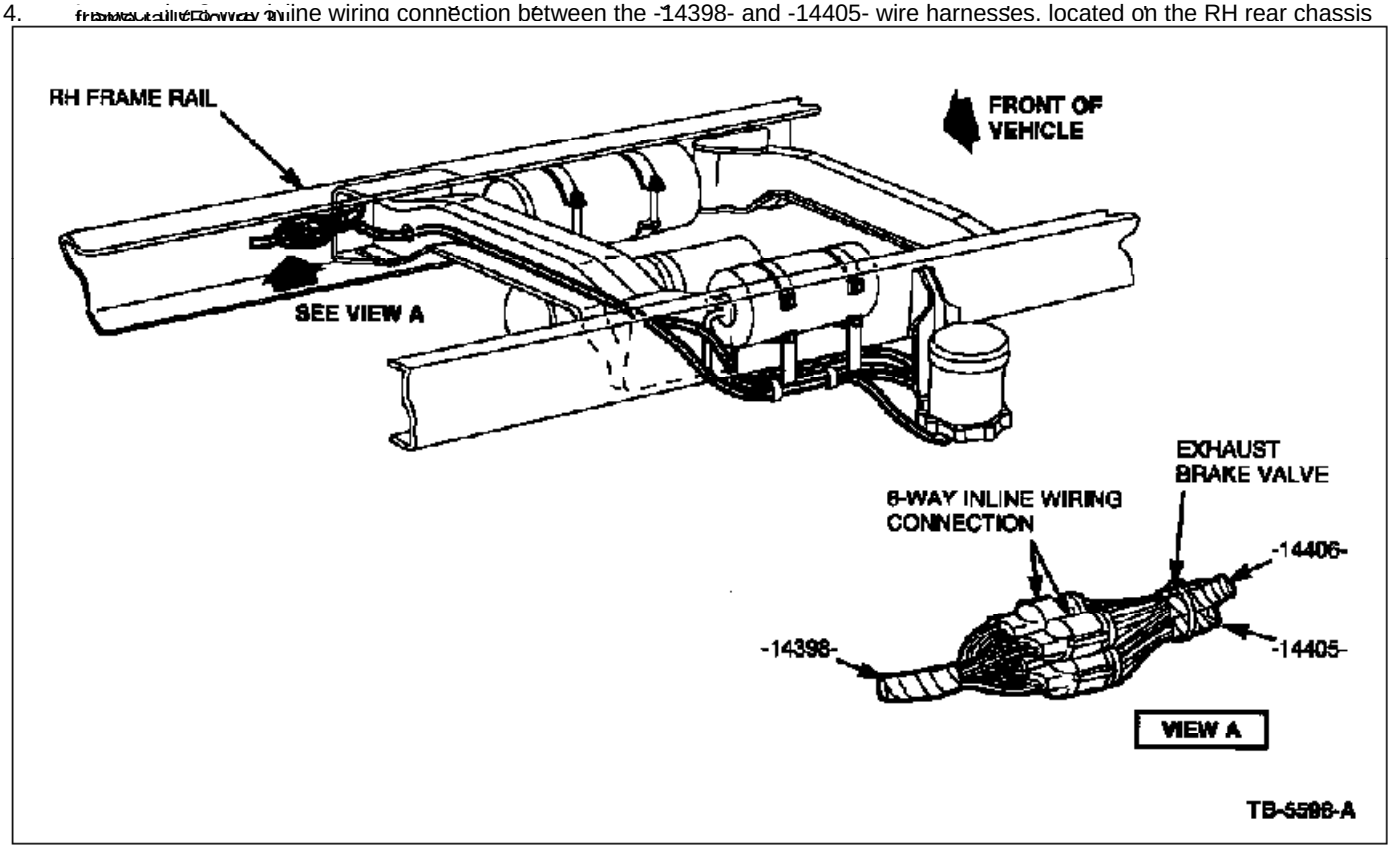


Figure 3 Article 98-20-1

a. Disconnect the 8-way inline connection from the connector support bracket (Figure 2).

b. Visually inspect the 8-way wiring connectors (male and female) for one of the following scenarios:

- Is there a greenish coating or corrosion formed on any of the 8 terminals in each male or female connector?
- If yes: Replace the connector using Ford Service Connector Kit (F5HT-19K271-DAA). Go to Step 5.
- If no: Reconnect the existing 8-way inline wiring connectors. Do not continue. Operation complete.

5 Inspect the 8-way inline wiring connection between the -14398- and -15525- or -7E203- wire harnesses located at the RH rear

Procedure: ssis frame rail (Figure 3).

a. Disconnect the 8-way inline connection from the connector support bracket shown in Figure 4.

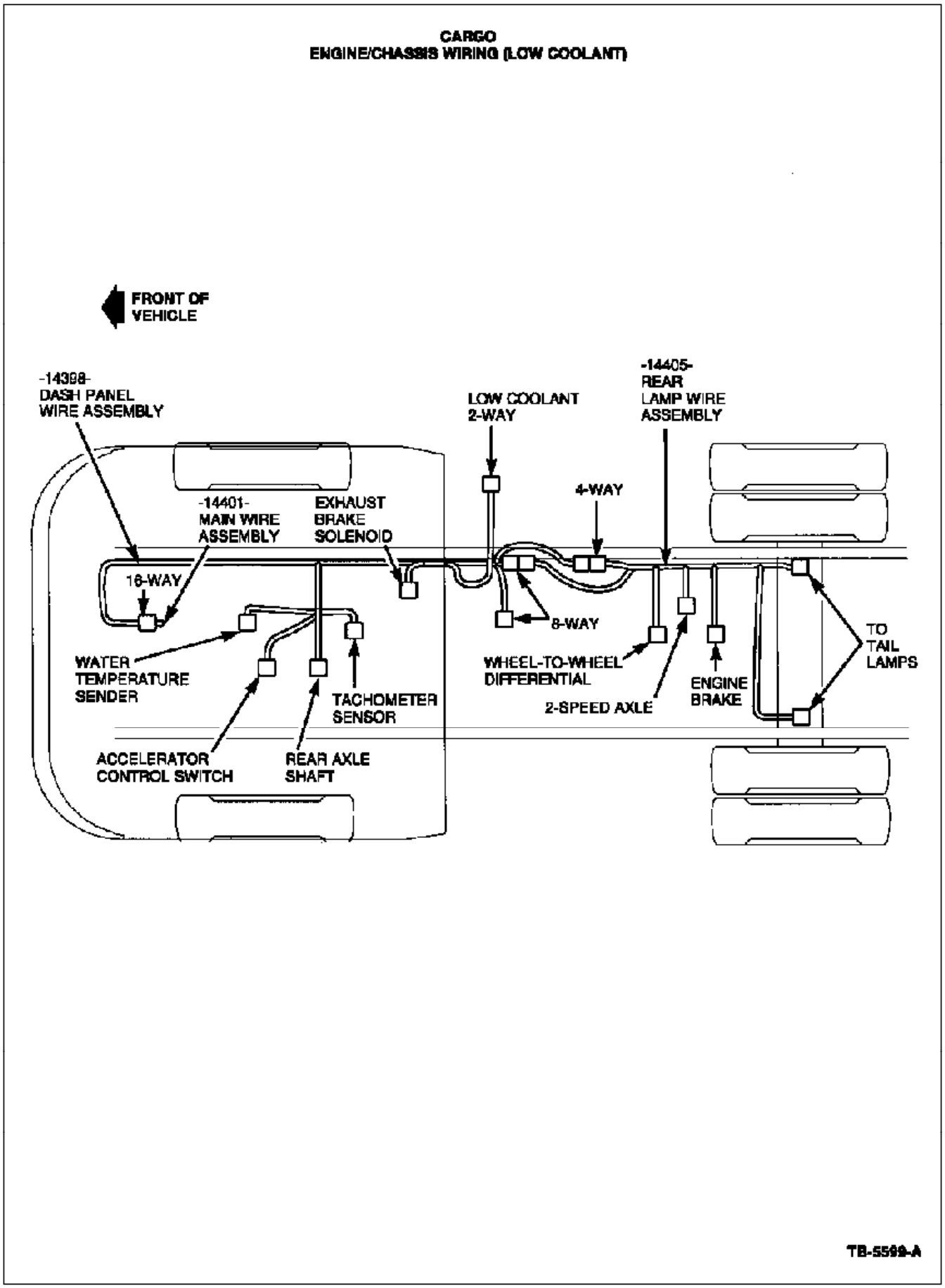


Figure 4 - Article 08-20-1

1) Is there a greenish coating or corrosion formed on any of the 8 terminals in each male or female connector?

- If yes, Replace the connector using Ford Service Connector Kit (F5HT-19K271-DCA). Do not continue. Operation

- If no: Go to Step 5b, 2) immediately following.

2) Is there a visible liquid presence of ethylene glycol (coolant)?

- If yes: Dry out the connectors using a high pressure air hose. Reconnect the existing 8-way inline connectors.
- If no: Reconnect the existing 8-way inline wiring connectors.

SERVICE PROCEDURE - LOUISVILLE/AEROMAX

1 Remove the low coolant level sensor located above the radiator on the side or top of the coolant reservoir (Figure 1). Replace new low coolant level sensor.
Procedure: Disconnect the wire harness connector from the low coolant level sensor.
b: Remove the low coolant level sensor from the coolant reservoir.
c: Install the new low coolant level sensor (XG4Z-10D968-AA).
d: Connect the wire harness connector to the low coolant level sensor.
2 Inspect the 2-way wiring connector to the low coolant level sensor (Figure 5).

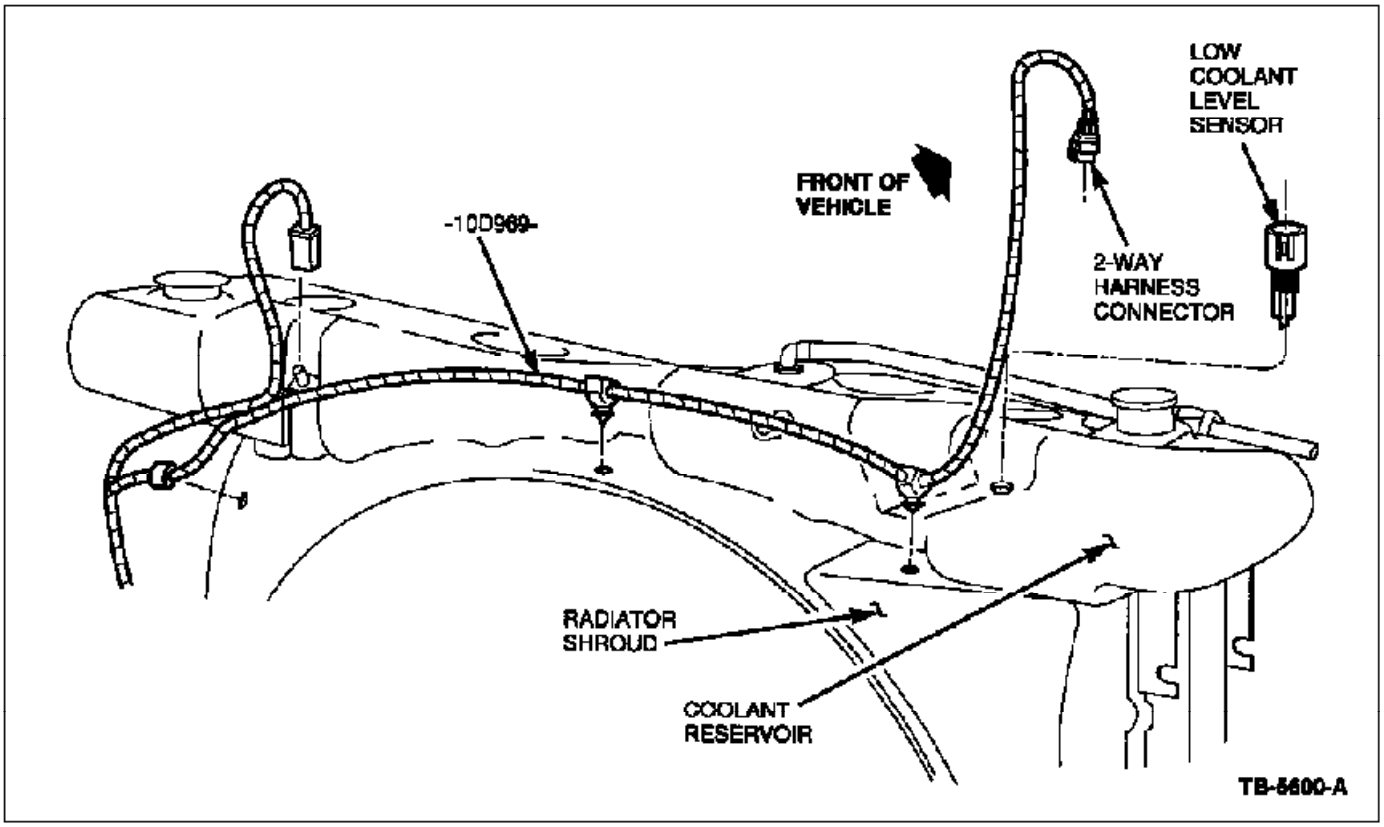


Figure 5 - Article 98-20-1

Procedure: The 2-way wiring connector should be disconnected from the low coolant level sensor.
b: Visually inspect the 2-way wiring connector for one of the following scenarios:
1) Is there a greenish coating formed on either of the 2 terminals?

- If yes: Replace the connector using Ford Service Connector Kit (F6HT-10K271-FEA) and connect the new 2-way wiring connector to the other end of service jumper harness. Go to Step 3.
- If no: Go to Step 2b, 2) immediately following.

2) Is there a visible liquid presence of ethylene glycol (coolant)?

- If yes: Dry out the connector using a high pressure air hose. Connect the dried out 2-way wiring connector to the other end of service jumper harness. Go to Step 3.
- If no: Connect the existing 2-way wiring connector to the other end of service jumper harness. Go to Step 3.

3 Locate the 2-way wiring connector from the -10D969- and -13K081- wire harnesses located at the LH forward

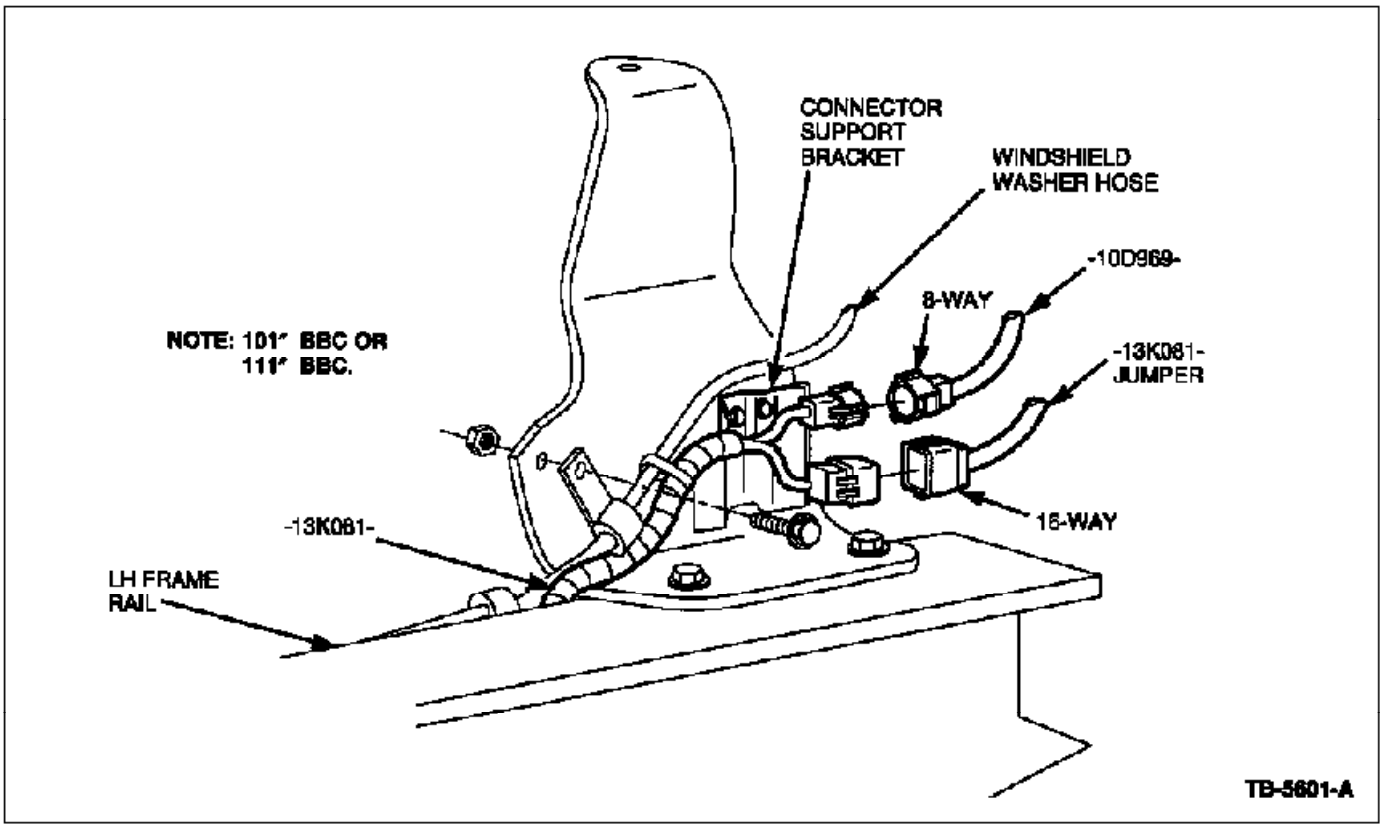


Figure 6 - Article 98-20-1

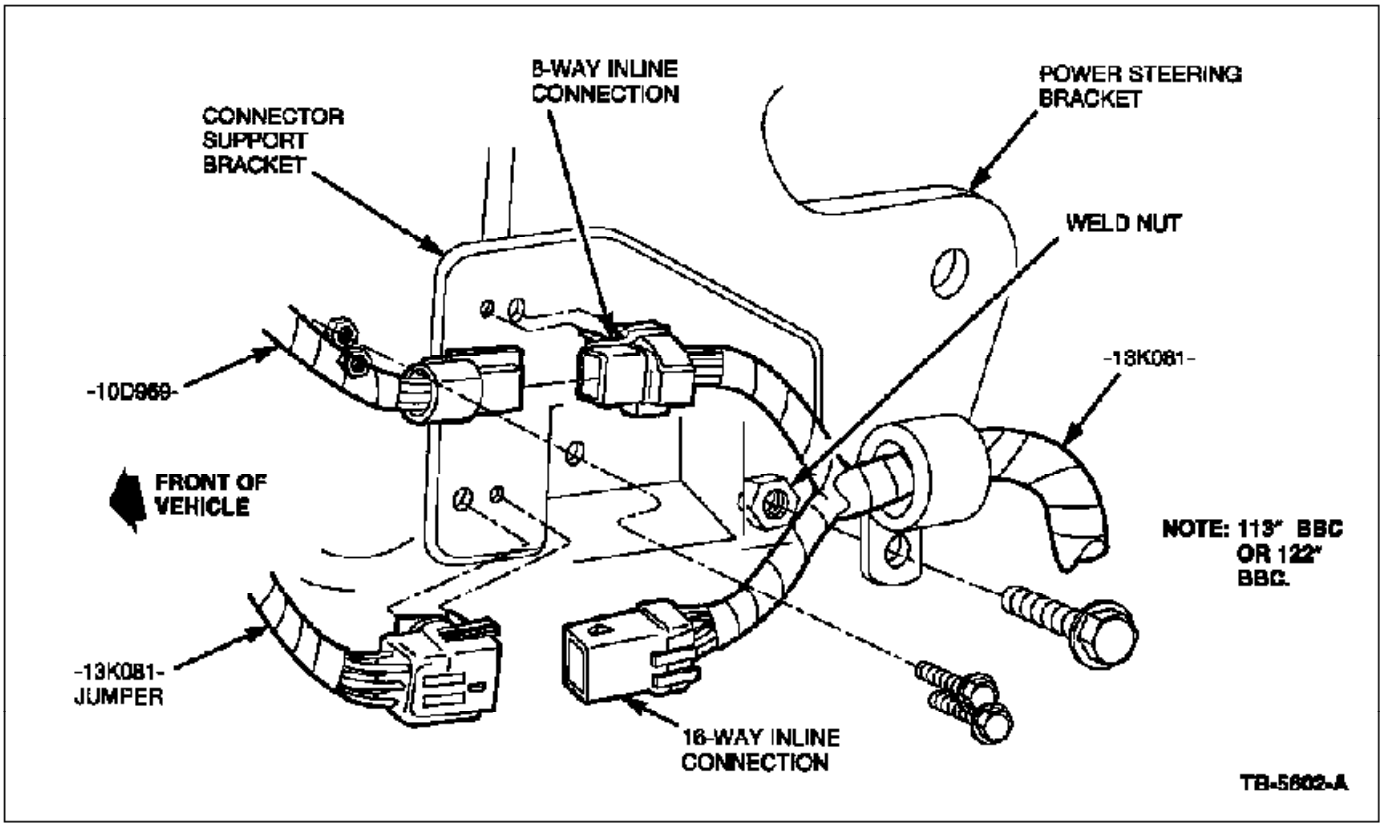


Figure 7 - Article 98-20-1

Procedure:

a. Disconnect the 8-way inline connection from the connector support bracket (Figure 7) without disturbing the Xmas tree

b. Visually inspect the 8-way wiring connectors (male and female) for one of the following scenarios:

1) Is there a greenish coating or corrosion formed on any of the 8 terminals in each male or female connector?

- If yes: Replace the connector using Ford Service Connector Kit (F6HZ-3L095-LE). Go to Step 4.
- If no: Go to Step 3b. 2) immediately following

2) Is there a visible liquid presence of ethylene glycol (coolant)?

- If yes: Dry out the connectors using a high pressure air hose. Reconnect the existing 8-way inline connectors. Go to Step 4.
- If no: Reconnect the existing 8-way inline wiring connectors. Do not continue. Operation complete.

4. Remove (if necessary) 8-way inline wiring connection between the -13K081- and -14290- wire harnesses, located on the LH forward

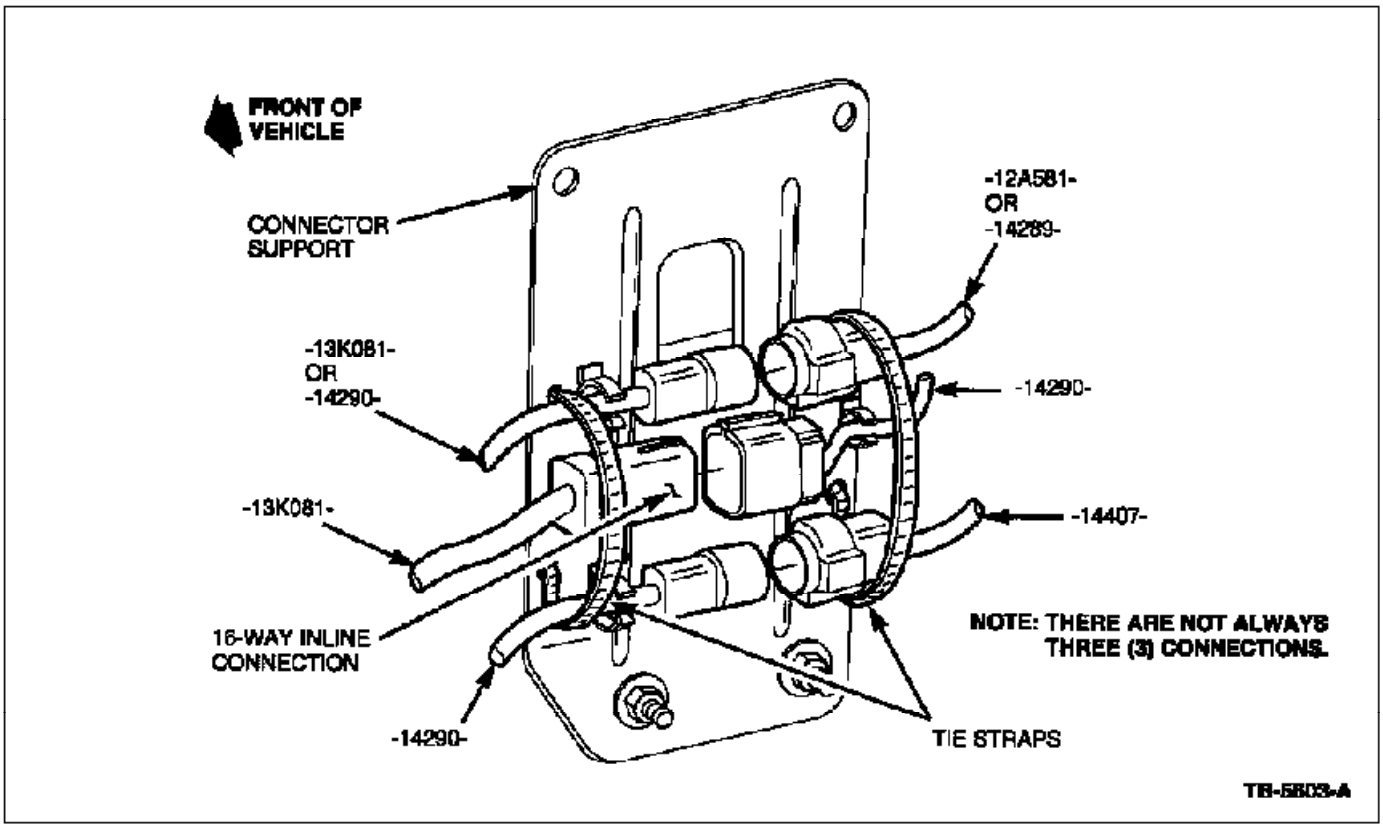


Figure 8 Article 98-20-1

Procedure:

a. Disconnect the 16-way inline connection from the connector support bracket (Figure 8) without disturbing the Xmas tree

b. Visually inspect the 16-way wiring connectors (male and female) for one of the following scenarios:

- Is there a greenish coating or corrosion formed on any of the 16 terminals in each male or female connector?
- If yes: Replace the connector using Ford Service Connector Kit (F6HZ-3L095-LD). Go to Step 5.
- If no: Reconnect the existing 16-way inline wiring connectors. Do not continue. Operation complete.

5 [illegible] jumper and -13K081- wire harnesses located at the LH

Procedure: frame rail near the power steering reservoir (Figure 6 or 7).

a. [illegible] way inline connection from the connector support bracket shown in Figure 9 without disturbing the

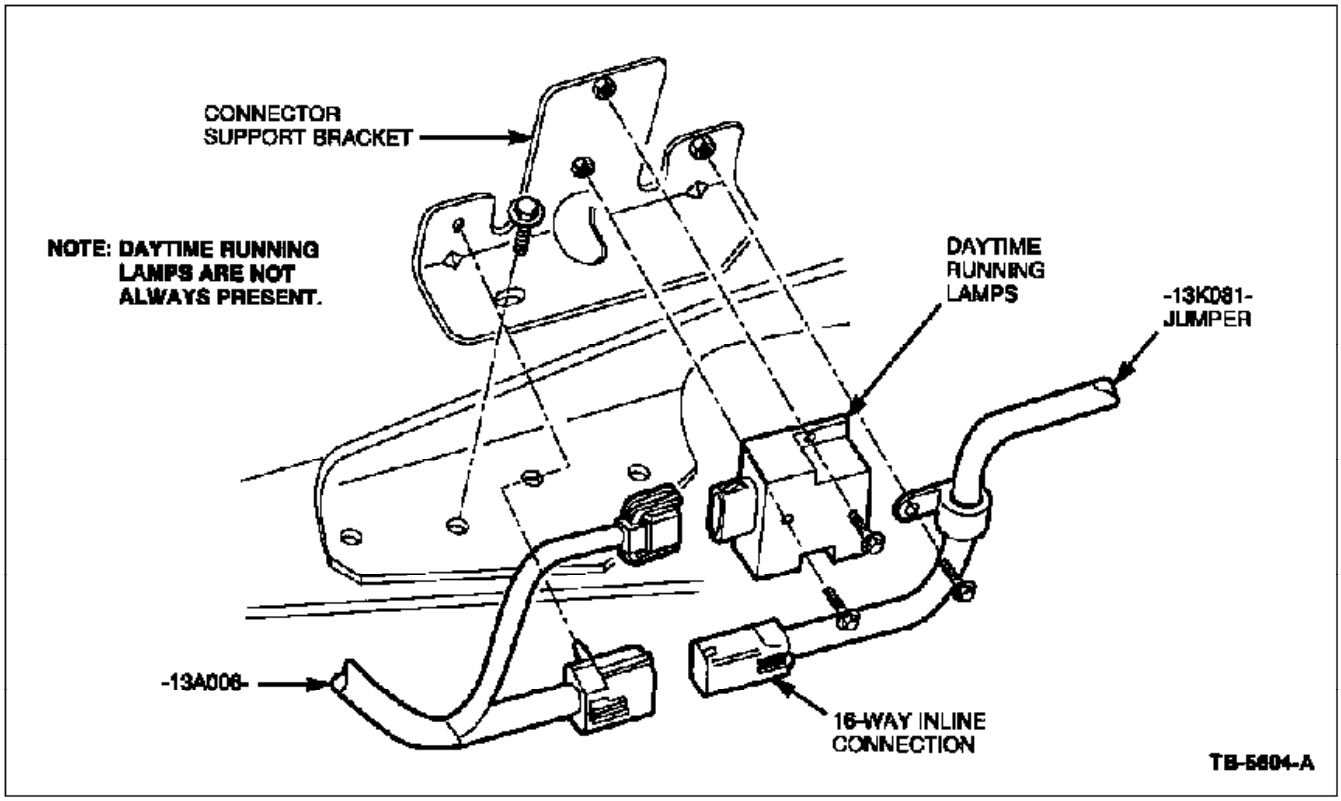


Figure 9 Article 98-20-1

[illegible] 16-way inline connectors (male and female) for one of the following scenarios:

1) Is there a greenish coating or corrosion formed on any of the 16 terminals in each male or female connector?

- If yes: Replace the connector using Ford Service Connector Kit (F6HZ-3L095-LC). Go to Step 6.

- If no: Go to Step 5b, 2) immediately following.
2) Is there a visible liquid presence of ethylene glycol (coolant)?
- If yes: Dry out the connectors using a high pressure air hose. Reconnect the existing 16-way inline connectors. Go to Step 6.
- If no: Reconnect the existing 16-way inline wiring connectors. Go to Step 7.

6 [illegible] Fringe (Figure 9).
Procedure [illegible]
a. [illegible] 16-way inline connection from the connector support bracket shown in Figure 6 without disturbing the
b. Visually inspect the 16-way inline connectors (male and female) for one of the following scenarios:
- Is there a greenish coating or corrosion formed on any of the 16 terminals in each male or female connector?
  - If yes: Replace the connector using Ford Service Connector Kit (F6HZ-3L095-LB) if the vehicle does NOT have Daytime Running Lamps. Use Ford Service Connector Kit (F6HZ-3L095-LA) if the vehicle does have Daytime Running Lamps. Go to Step 7.
- If no: Reconnect the existing 16-way inline wiring connectors. Go to Step 7.

7 Inspect the lower 76-way bulkhead connection of the -14290- wire harness located at the LH side of the bulkhead (Figure 11)

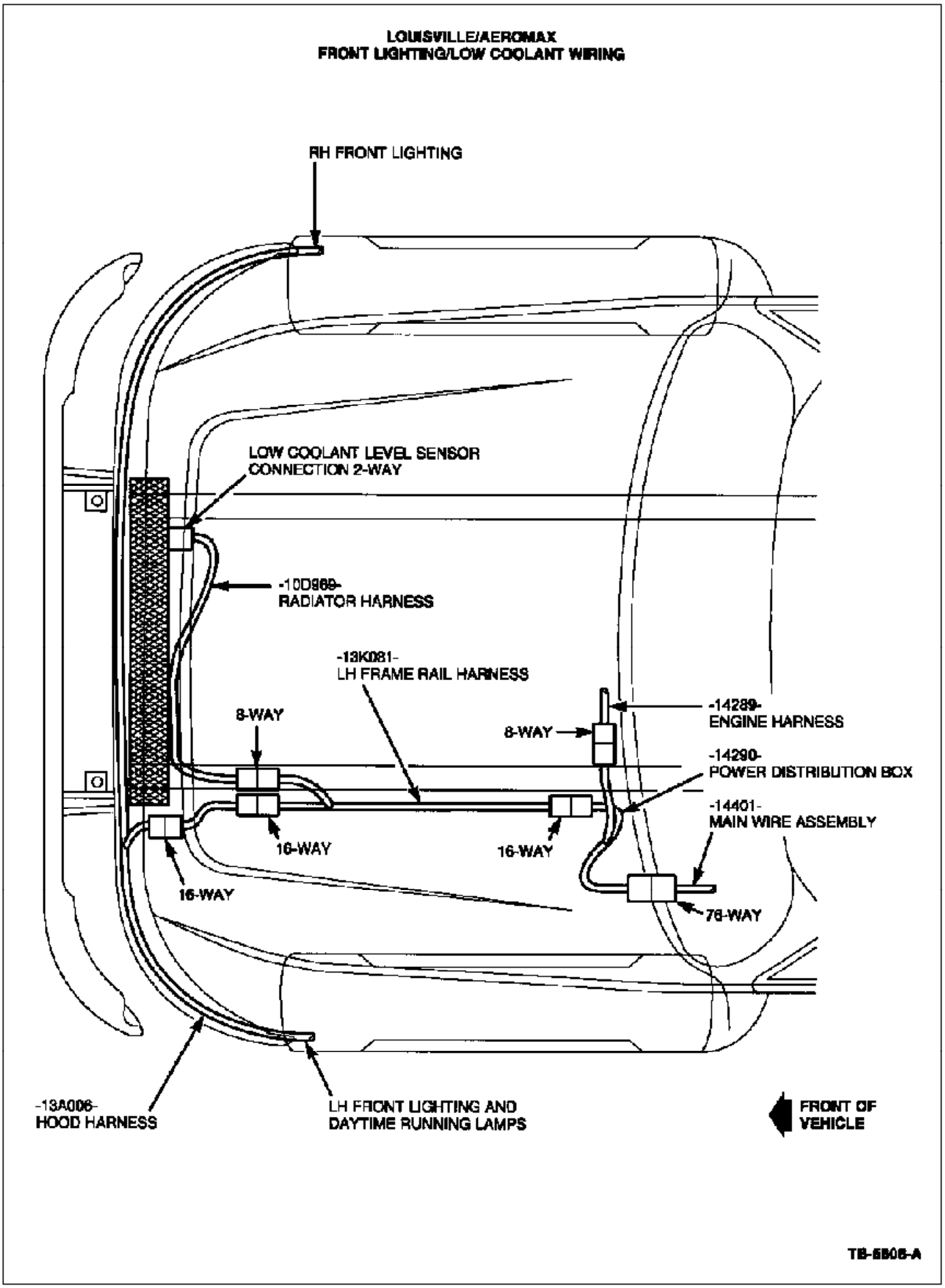


Figure 11 - Article 98-20-1

a. Disconnect the 76-way bulkhead using a 5/16" socket (Figure 10).

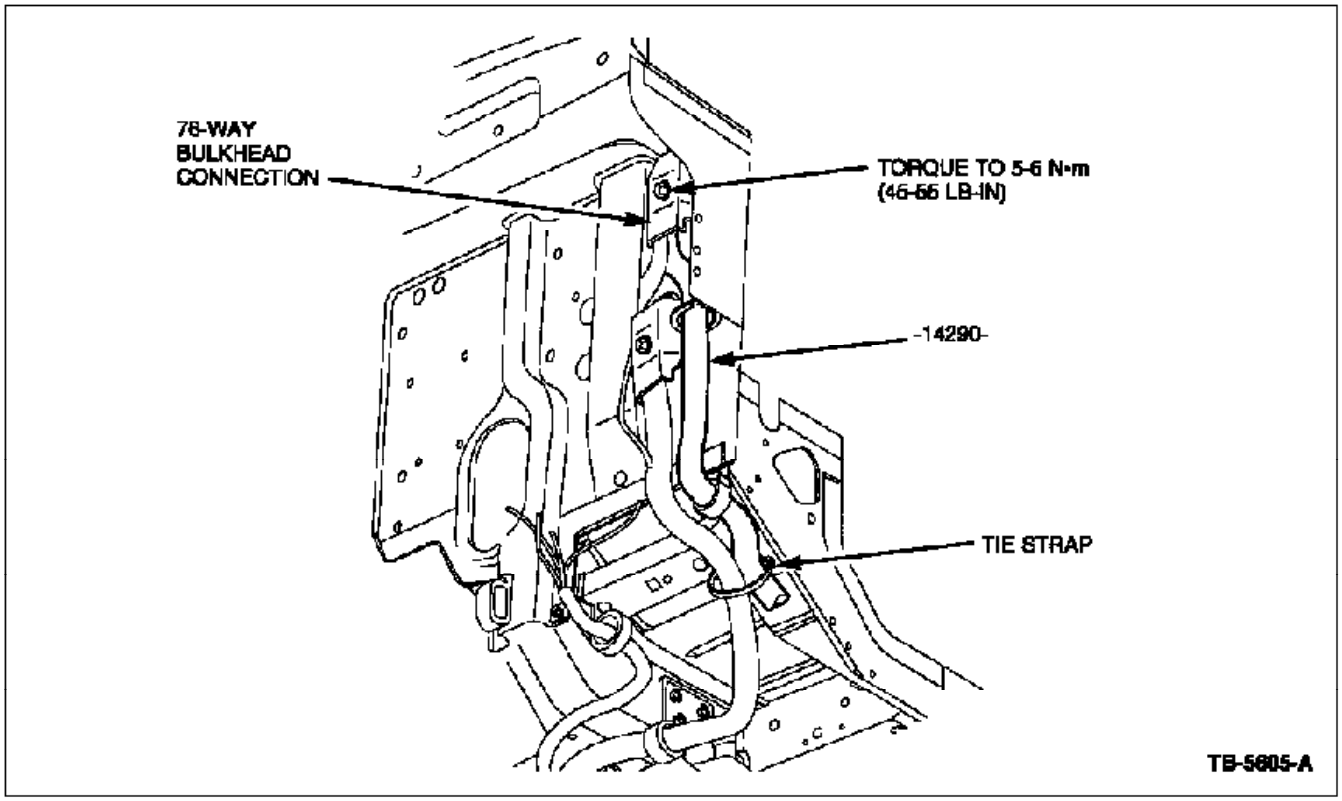


Figure 10. Article 98-20-1

b. Visually inspect the 76-way connector for the presence of ethylene glycol (coolant). Is ethylene glycol present?

- If yes: Dry out the 76-way connector using a high pressure air hose. Reinstall the 76-way bulkhead connector and torque to 5-6 N·m (45-55 lb-in).
- If no: Reconnect the 76-way bulkhead connector using a 5/16" socket (Figure 10).

PART NUMBER	PART NAME
XC4Z-10D968-AA	Low Coolant Level Sensor
F6HZ-14A382-AA	Jumper Harness
F5HT-19K271-FEA	2-Pin Mating Connector Kit
F6HZ-3L095-LA	Inline Connector Kit (Louisville/AeroMax)
F6HZ-3L095-LB	Inline Connector Kit (Louisville/AeroMax)
F6HZ-3L095-LC	Inline Connector Kit (Louisville/AeroMax)
F6HZ-3L095-LD	Inline Connector Kit (Louisville/AeroMax)
F6HZ-3L095-LE	Inline Connector Kit (Louisville/AeroMax)
F5HT-19K271-DAA	Inline Connector Kit (Cargo)
F5HT-19K271-DBA	Inline Connector Kit (Cargo)
F5HT-19K271-DCA	Inline Connector Kit (Cargo)

OTHER APPLICABLE ARTICLES:

- **98-11-3**
- **98-7-11**

WARRANTY STATUS: Eligible Under Basic Warranty Coverage

LABOR ALLOWANCE

OPERATION	DESCRIPTION	TIME
982001A	Use M-Time In Accordance To The Warranty And Policy Manual	

DEALER CODING

BASIC PART NO.	CONDITION CODE
10D968	49

CASE CODES: 202000, 204000, 206000, 402000

98-20 ***Publication Date: SEPTEMBER 25, 1998***

Power Distribution Box - Replacement Cover Available For Service - Service Tip	**Article No. 98-20-2**

VEHICLES AFFECTED: AEROSTAR, AEROMAX, CONNISVILLE
E-SERIES WITH WIRE HARNESS ASSEMBLY

A new wire harness assembly is now available separately for service. Previously, the box cover was only available as part of the wire harness assembly. If required, replace only the power distribution box cover.

PART NUMBER	PART NAME
XC4Z-14A090-AA	Distribution Box Cover

OTHER APPLICABLE ARTICLES: NONE
WARRANTY STATUS: INFORMATION ONLY

PTO - PTO Equipment Attaching Service Tips	Article No. 98-20-14

[illegible] due to the fact that the 7/16"-18 threads in the PTO adapter may not be standard and the attaching hardware may [illegible]

PART NUMBER	PART NAME
F8HT-7A772-AA	PTO Adapter

OTHER APPLICABLE ARTICLES: NONE

WARRANTY STATUS: Eligible Under Basic Warranty Coverage

LABOR ALLOWANCE

OPERATION	DESCRIPTION	TIME
982014A	Replace PTO Adapter	0.4 Hr.

DEALER CODING

BASIC PART NO.	CONDITION CODE
7A772	42

BASIC CODES: 108000

Turn Signal Switch - Handle Loose And/Or Broken - Service Tip	Article No. 98-20-20

MODEL: PRIMAX, LOUISVILLE

SYMPTOM: Turn signal switch handle may become loose/broken on some vehicles.

FOR: [illegible] revised turn signal switch. Refer to the 1998 Louisville/AeroMax Workshop Manual, Section 211-05, [illegible] SWITCH HOUSING BELOW ATTACHING POINTS (SWITCH MUST BE [illegible]

PART NUMBER	PART NAME
F8HZ-13B302-BA	Turn Signal Switch

OTHER APPLICABLE ARTICLES: NONE

WARRANTY STATUS: Eligible Under Basic Warranty Coverage

LABOR ALLOWANCE

OPERATION	DESCRIPTION	TIME
982020A	Replace Turn Signal Switch	0.4 Hr.

DEALER CODING

BASIC PART NO.	CONDITION CODE
13B302	01

CASIC CODES: 201000, 201200, 202000, 205000

Starter - New Heavy Duty Starter Released For Service	**Article No. 98-20-21**

MEDIUM/HEAVY TRUCK:

[illegible] for the CAT 3126 engine. Customers have requested heavy duty starters for [illegible] the 41MT starter is the same as for the production [illegible]

PART NUMBER	PART NAME
DR-10479215	41MT Starter

OTHER APPLICABLE ARTICLES: NONE

WARRANTY STATUS: INFORMATION ONLY

CAMPAIGN CODES: [illegible]

Generator - Revised Generator Released For Service	**Article No. 98-20-22**

APPLICATION: ALL MAXIMUS VANS

Delco Remy has made available a revised generator for service [illegible] Delco 21-SI generator when generator replacement is required. Refer to the chart below for [illegible] according to the following [illegible] mounting brackets, belts, etc.

CROSS REFERENCE	
Old Alternator 21-SI	**Replace with New 22-SI**
F4HT-10300-DA - (100A)	XC45-10300-NA - (100A)
F4HT-10300-EA - (100A)	XC45-10300-PA - (100A)
F4HT-10300-KA - (100A)	XC45-10300-EA - (100A)
XC45-10300-AA - (100A)	XC45-10300-KA - (100A)
F4HT-10300-GA - (115A)	XC45-10300-FA - (130A)
F4HT-10300-HA - (115A)	XC45-10300-GA - (130A)
F4HT-10300-LA - (115A)	XC45-10300-MA - (130A)
XC45-10300-BA - (115A)	XC45-10300-LA - (130A)
F6HT-10300-BA - (130A)	XC45-10300-FA - (130A)
F6HT-10300-CA - (130A)	XC45-10300-GA - (130A)
F1HS-10346-AA - (130A) (less pulley)	XC45-10300-MA - (130A) - Use F3HZ-10344-B pulley
F1HS-10346-AA - (130A) (less pulley)	XC45-10300-LA - (130A) - Use F8HS-10A352-AA pulley
F6HT-10300-EA - (145A)	XC45-10300-HA - (145A)
F6HT-10300-FA - (145A)	XC45-10300-JA - (145A)
F1HS-10346-CA - (145A) (less pulley)	XC4S-10300-AA - (145A) - Use F3HZ-10344-B pulley
F1HS-10346-CA - (145A) (less pulley)	XC4S-10300-BA - (145A) - Use F8HS-10A352-AA pulley

NOTE: [illegible] 22-SI GENERATOR IS NOT AVAILABLE IN THE 115A RATING. REPLACEMENT IS WITH THE 130A VERSION.

PART NUMBER	PART NAME
XC4S-10300-AA	Generator
XC4S-10300-BA	Generator
XC45-10300-EA	Generator
XC45-10300-FA	Generator
XC45-10300-GA	Generator
XC45-10300-HA	Generator
XC45-10300-JA	Generator
XC45-10300-KA	Generator
XC45-10300-LA	Generator
XC45-10300-MA	Generator
XC45-10300-NA	Generator
XC45-10300-PA	Generator
F3HZ-10344-B	Pulley
F8HS-10A352-AA	Pulley

OTHER APPLICABLE ARTICLES: NONE

WARRANTY STATUS: INFORMATION ONLY

CLAIM DETAILS: [illegible]

Body - Ready Line Access Door - Butterfly Door - Transverse Access Door - Hinge And Hinge Springs Now Available For Service	**Article No. 98-20-23**

[illegible] FROM MAXTON/SVILLE
[illegible] and hinge springs are now available for service for the optional ready line access door, butterfly doors or transverse access [illegible] is required to the hinge and/or hinge springs, refer to the following Application Chart for correct part usage.

APPLICATION			
Model	**Door Description**	**Hinge Part Number**	**Spring Part Number**
101" BBC	Ready Line Access	F8HT-42430-BA	None Used
101" BBC	Butterfly Door	F8HT-42430-BA	None Used
111" BBC	Butterfly Door	F8HT-42430-BA	None Used
113" BBC	Ready Line Access	F7HT-42430-BA	XC4Z-MF062A-AA
122" BBC	Ready Line Access	F7HT-42430-BA	XC4Z-MF062A-AA
113" BBC	Transverse Access	F8HT-42430-BA	None Used

PART NUMBER	PART NAME
F8HT-42430-BA	Hinge
F7HT-42430-BA	Hinge
XC4Z-MF062A-AA	Spring

OTHER APPLICABLE ARTICLES: NONE
WARRANTY STATUS: INFORMATION ONLY
[illegible]

• Hood - Air Cleaner Rubs On Hood • Air Cleaner - Rubs On Hood	Article No. 98-21-4

WORLDWIDE TRUCK:

SERVICE PROCEDURE

2.

3. Repair wear on the hood using standard Ford fiberglass hood repair procedures.

PART NUMBER	PART NAME
F4HZ-9661-BA	Air Cleaner Cover

OTHER APPLICABLE ARTICLES: NONE

WARRANTY STATUS: Eligible Under Basic Warranty Coverage And Applicable Emissions Warranty Coverage

LABOR ALLOWANCE

OPERATION	DESCRIPTION	TIME
982104A	Replace Cover, Repair And Refinish Hood	1.7 Hrs.

DEALER CODING

BASIC PART NO.	CONDITION CODE
9600	07

BASIC CODES 106000, 108000, 111000

Axle Alignment - Hendrickson Tandem Axle - New Service Parts Released	**Article No. 98-21-15**

[illegible] have a provision for adjustment. A new bar pin system and spacers are now available that will permit alignment of the [illegible] in order to obtain the correct alignment. Refer to the following [illegible] chart, refer to Parts Usage Chart included in this TSB. Parts can be obtained from your dealer or directly from Hendrickson [illegible]

PART USAGE				
Suspension	**Old Ford Part Number**	**Old Hendrickson Part Number**	**New Ford Part Number (reference)**	**New Hendrickson Part Number**
RS/RT, 52"	F4HT-5889-CA	50000-017	XC45-5889-FA	HDR50500-017
RT-400/460, 52"	F4HT-5889-DA	50001-010	XC45-5889-GA	HDR50501-010
RT-400, 60"	F4HT-5889-FA	50000-012	XC45-5889-KA	HDR50500-012
RS/RT, 54"	F4HT-5889-GA	50001-012	XC45-5889-HA	HDR50501-012
RS/RT, 54"	F4HT-5889-HA	50000-021	XC45-5889-JA	HDR50500-021
RT-460/480/520, 60"	F4HT-5889-JA	50000-013	XC45-5889-LA	HDR50500-013
RT-400, 54"	F4HS-5889-GA	50000-020	XC4S-5889-BA	HDR50500-020
RT-400, 72.5"	F4HS-5889-HA	50000-014	XC4S-5889-CA	HDR50500-014
RT-460, 52"	F4HS-5889-JA	50000-018	XC4S-5889-DA	HDR50500-018
RT-460, 72.5"	F4HS-5889-KA	50000-015	XC4S-5889-EA	HDR50500-015
RT-520, 54"	F4HS-5889-RA	50000-009	XC4S-5889-FA	HDR50500-009
RT-520, 54"	F4HS-5889-SA	50001-007	XC4S-5889-GA	HDR50501-007
U/RT-340, 52"	F5HT-5889-BA	50000-023	XC45-5889-EA	HDR50500-003
RT-340, 52"	F6HS-5889-AA	50001-013	XC4S-5889-AA	HDR50501-001
HN-402, 54"	F7HS-5889-AA	57889-001	XC4S-5889-HA	HDR57889-002
HN462, 54"	F8HS-5889-AA	58494-001	XC4S-5889-JA	HDR58494-002
Use Alignment Spacers (usage as required):			XC45-4B474-AA	HDR50130-000
			XC45-4B474-BA	HDR50131-000
			XC45-4B474-CA	HDR57026-000

Follow alignment instructions as per Hendrickson Technical Publication No. 17730-213.

PART NUMBER	PART NAME
HDR50500-017	Walking Beam
HDR50501-010	Walking Beam
HDR50500-012	Walking Beam
HDR50501-012	Walking Beam
HDR50500-021	Walking Beam
HDR50500-013	Walking Beam
HDR50500-020	Walking Beam
HDR50500-014	Walking Beam
HDR50500-018	Walking Beam
HDR50500-015	Walking Beam
HDR50500-009	Walking Beam
HDR50501-007	Walking Beam
HDR50500-003	Walking Beam
HDR50501-001	Walking Beam
HDR57889-002	Walking Beam
HDR58494-002	Walking Beam
HDR50130-000	Alignment Spacers
HDR50131-000	Alignment Spacers
HDR57026-000	Alignment Spacers

OTHER APPLICABLE ARTICLES: NONE

WARRANTY STATUS: INFORMATION ONLY

• **Cooling System - Coolant Leak At Lower Radiator Hose - Hose Comes Off Of Water Pump - Vehicles Equipped With Cat 3306 Engine** • **Cooling System - Lower Radiator Hose Comes Off At Water Pump - Vehicles Equipped With Cat 3306 Engine**	**Article No. 98-21-16**

MODELS: 613C, 613C II, 615C, 615C II, 623C, 623C II, 627C, 627C II, 631C, 631C II, 633C, 633C II, 637C, 637C II, 639C, 639C II, 651C, 651C II, 657C, 657C II, 660C, 660C II, 666C, 666C II, 730C, 730C II, 735C, 735C II, 740C, 740C II, 745C, 745C II, 770C, 770C II, 772C, 772C II, 775C, 775C II, 777C, 777C II, 785C, 785C II, 789C, 789C II, 793C, 793C II, 797C, 797C II, D6M, D6M II, D7G, D7G II, D8N, D8N II, D9N, D9N II, D10N, D10N II, D11N, D11N II, 613C, 613C II, 615C, 615C II, 623C, 623C II, 627C, 627C II, 631C, 631C II, 633C, 633C II, 637C, 637C II, 639C, 639C II, 651C, 651C II, 657C, 657C II, 660C, 660C II, 666C, 666C II, 730C, 730C II, 735C, 735C II, 740C, 740C II, 745C, 745C II, 770C, 770C II, 772C, 772C II, 775C, 775C II, 777C, 777C II, 785C, 785C II, 789C, 789C II, 793C, 793C II, 797C, 797C II, D6M, D6M II, D7G, D7G II, D8N, D8N II, D9N, D9N II, D10N, D10N II, D11N, D11N II

ENGINES: 3306 (S/N: 4ZR1-Up; 4WG1-Up; 4YG1-Up; 4ZS1-Up; 4WJ1-Up; 4YJ1-Up; 4ZT1-Up; 4WK1-Up; 4YK1-Up; 4ZW1-Up; 4WL1-Up; 4YL1-Up; 4ZX1-Up; 4WM1-Up; 4YM1-Up; 4ZY1-Up; 4WN1-Up; 4YN1-Up; 4ZZ1-Up; 4WP1-Up; 4YP1-Up; 4ZA1-Up; 4WR1-Up; 4YR1-Up; 4ZB1-Up; 4WS1-Up; 4YS1-Up; 4ZC1-Up; 4WT1-Up; 4YT1-Up; 4ZD1-Up; 4WU1-Up; 4YU1-Up; 4ZE1-Up; 4WV1-Up; 4YV1-Up; 4ZF1-Up; 4WW1-Up; 4YW1-Up; 4ZG1-Up; 4WX1-Up; 4YX1-Up; 4ZH1-Up; 4WY1-Up; 4YY1-Up; 4ZJ1-Up; 4WZ1-Up; 4YZ1-Up; 4ZK1-Up; 4W01-Up; 4Y01-Up; 4ZL1-Up; 4W11-Up; 4Y11-Up; 4ZM1-Up; 4W21-Up; 4Y21-Up; 4ZN1-Up; 4W31-Up; 4Y31-Up; 4ZP1-Up; 4W41-Up; 4Y41-Up; 4ZR1-Up; 4WG1-Up; 4YG1-Up; 4ZS1-Up; 4WJ1-Up; 4YJ1-Up; 4ZT1-Up; 4WK1-Up; 4YK1-Up; 4ZW1-Up; 4WL1-Up; 4YL1-Up; 4ZX1-Up; 4WM1-Up; 4YM1-Up; 4ZY1-Up; 4WN1-Up; 4YN1-Up; 4ZZ1-Up; 4WP1-Up; 4YP1-Up; 4ZA1-Up; 4WR1-Up; 4YR1-Up; 4ZB1-Up; 4WS1-Up; 4YS1-Up; 4ZC1-Up; 4WT1-Up; 4YT1-Up; 4ZD1-Up; 4WU1-Up; 4YU1-Up; 4ZE1-Up; 4WV1-Up; 4YV1-Up; 4ZF1-Up; 4WW1-Up; 4YW1-Up; 4ZG1-Up; 4WX1-Up; 4YX1-Up; 4ZH1-Up; 4WY1-Up; 4YY1-Up; 4ZJ1-Up; 4WZ1-Up; 4YZ1-Up; 4ZK1-Up; 4W01-Up; 4Y01-Up; 4ZL1-Up; 4W11-Up; 4Y11-Up; 4ZM1-Up; 4W21-Up; 4Y21-Up; 4ZN1-Up; 4W31-Up; 4Y31-Up; 4ZP1-Up; 4W41-Up; 4Y41-Up)

CONDITION: Coolant leaks at the lower radiator hose. The hose comes off of the water pump. This may be due to the lower radiator hose clamp screw coming in contact with the engine front crossmember during engine roll. Refer to the following Service Procedure.

SERVICE PROCEDURE:

1. Drain the coolant from the radiator.
2. Tighten the hose clamp to 7.9 N·m (84.98 lb-in) and orient the hose clamp screw to the inboard side of the radiator hose.
3. Inspect the engine and the radiator hose located on the water pump connection during engine roll, the wrap around the clip at the hose may be removed.

OTHER APPLICABLE ARTICLES: NONE

WARRANTY STATUS: Eligible Under Basic Warranty Coverage

LABOR ALLOWANCE:

OPERATION	DESCRIPTION	TIME
982116A	Correct Clamp	0.4 Hr.

DEALER CODING:

BASIC PART NO.	CONDITION CODE
8287	12

CAUSE CODES: 403000, 407000, 409000, 708100

Noise - "Banging" Noise Heard During Driveline Torque - Vehicles Built Through 11/30/97 Equipped With CAT 3306C Engine	**Article No. 98-21-18**

MODELS AFFECTED

[illegible] MAXXFORCE, NISVILLE

[illegible] engine torque. This may be caused by contact between the flywheel housing and the lower frame rail flange during vehicle operation.

SERVICE PROCEDURE

FLYWHEEL HOUSING STARTER MOUNT BOSS MODIFICATION

1. Mark the exact point of contact on the starter mount boss relative to the lower frame rail flange.
2. [illegible] frame rail flange. This can be accomplished by removing
3. [illegible] pivot when raising the engine from the rear.
4. Remove the starter mount; grind the starter mount boss while maintaining a tangent plane along the length of the boss (refer to

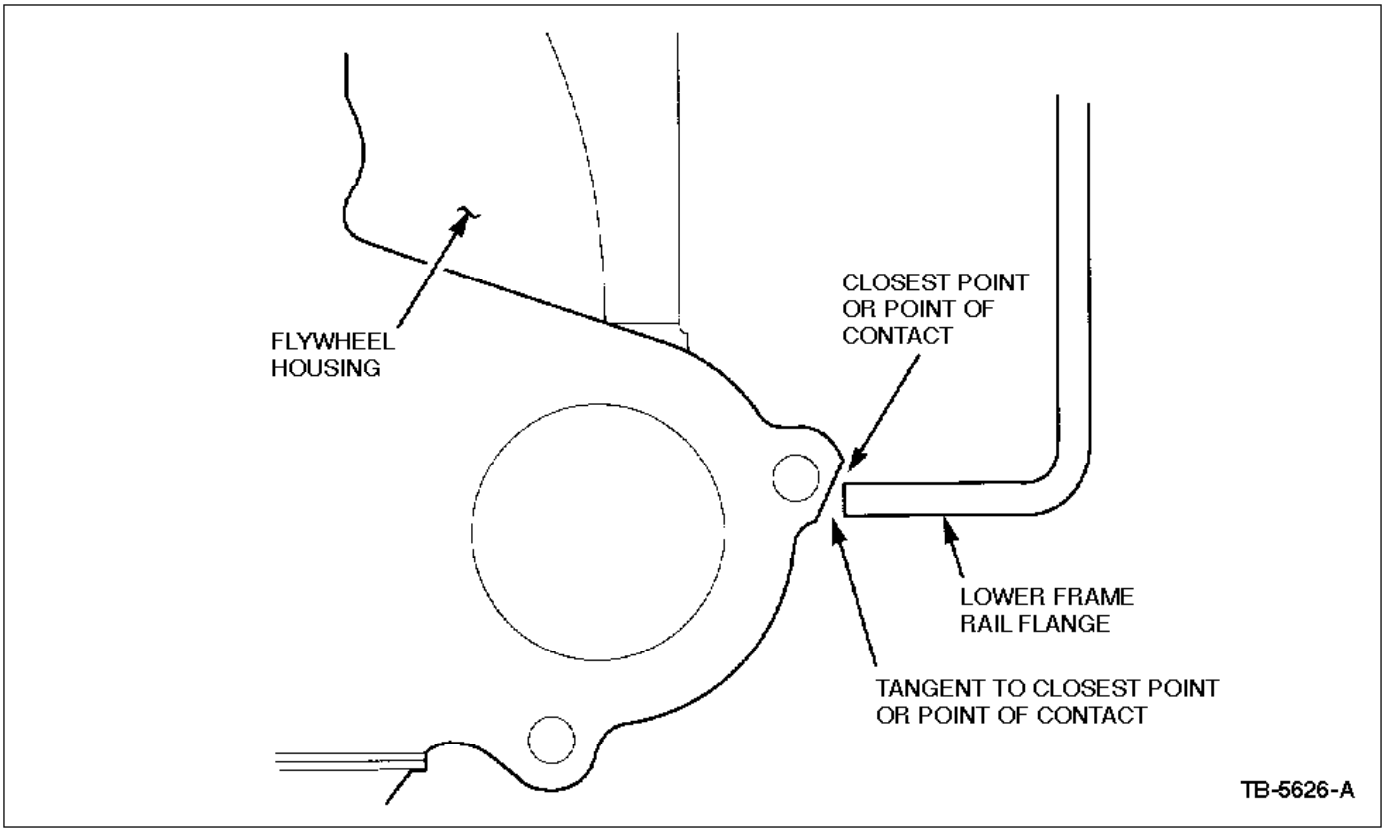

FLYWHEEL HOUSING
CLOSEST POINT OR POINT OF CONTACT
LOWER FRAME RAIL FLANGE
TANGENT TO CLOSEST POINT OR POINT OF CONTACT
TB-5626-A

Figure 1 - Article 98-21-18

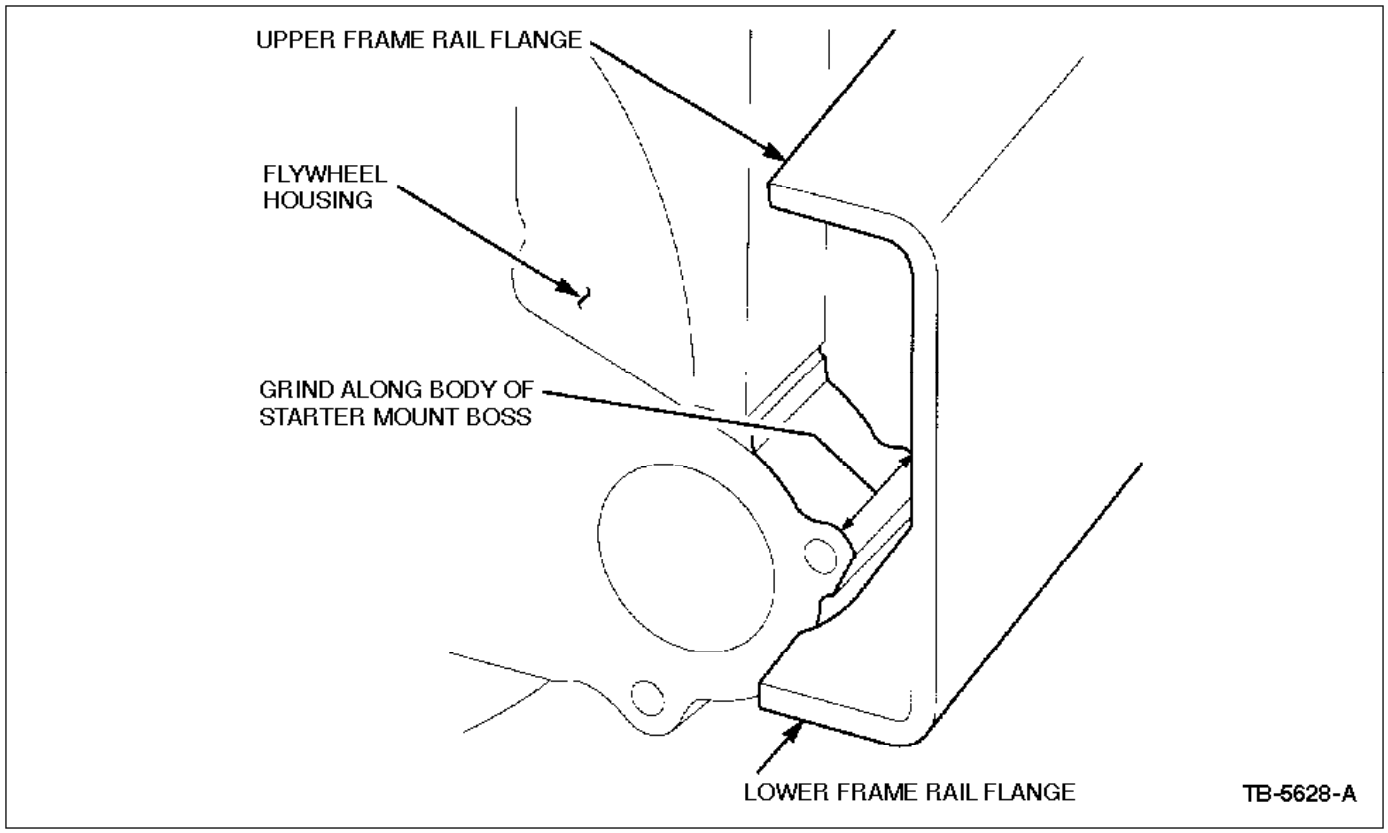


Figure 2 - Article 98-21-18

DO NOT GRIND OFF MORE THAN 5mm (0.20") FROM THE CLOSEST POINT OF CONTACT.

6. If the desired clearance is not obtained, material must be removed from the lower frame rail flange (refer to

FRAME RAIL FLANGE MODIFICATION PROCEDURE, DO NOT REMOVE MORE FRAME RAIL MATERIAL

1. Bulletin Number HR-5-02 will help identify the vehicle frame section modulus. not available, your dealer or

FRAME SECTION MODULUS 20.25 IS ALREADY CUT OUT IN PRODUCTION.

2. Identify and mark the portion of the lower frame rail flange which needs to be modified (refer to Figure 2).

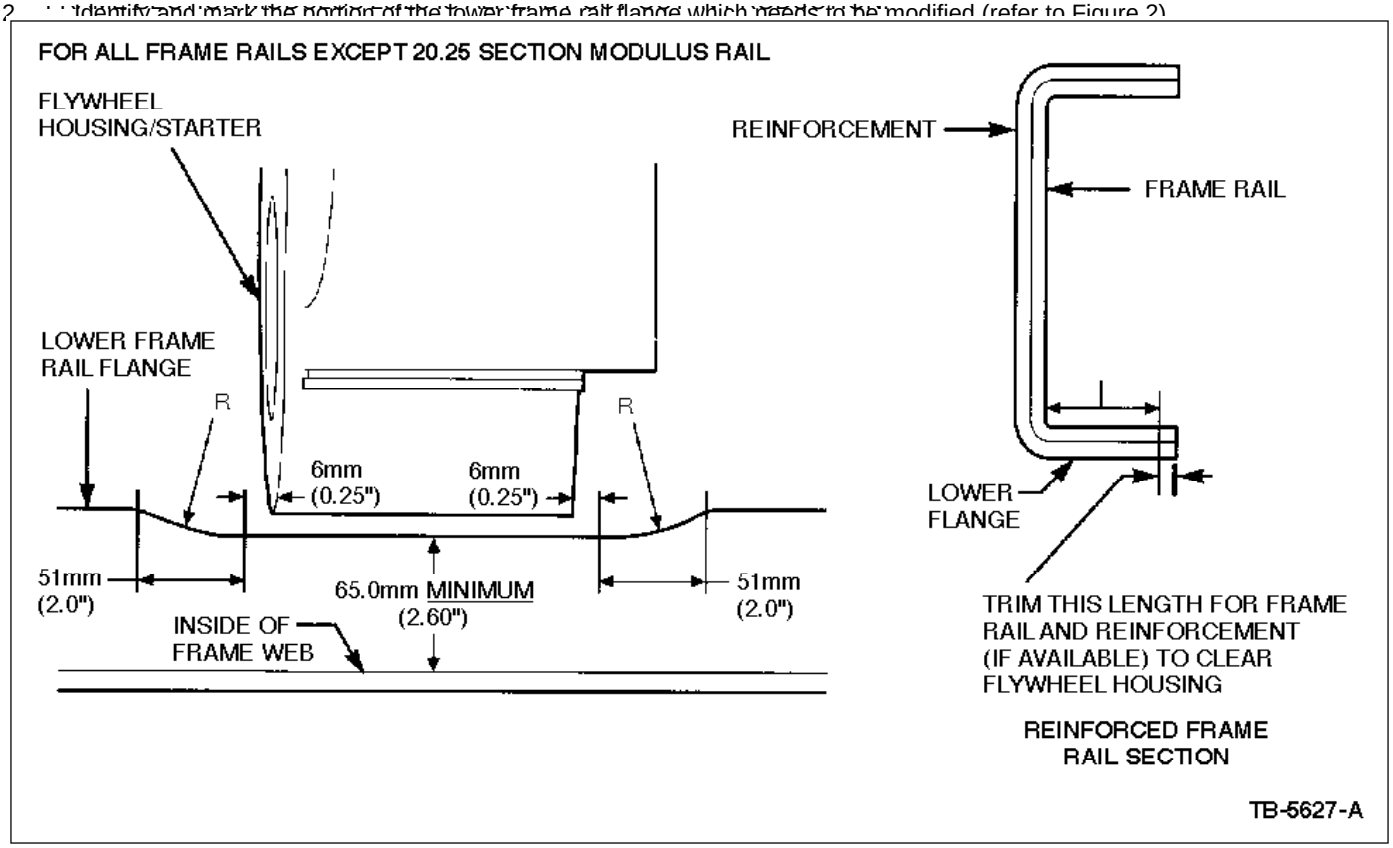


Figure 3 - Article 98-21-18

3. Mark the lower frame rail flange in this area with a straight line no less than 65mm (2.60") from the inside web (refer to Figure
4. ends of the flange area to be modified so that the modified area "blends" into the non-modified frame flange (refer to
5. will allow the engine to rotate counterclockwise from the rear. Next loosen the front engine mount support bolts.

FLANGE MODIFICATION

1. Carefully remove the section of the marked flange by using one of the following methods ONLY.

a. [illegible] grinder to remove the remaining material up to the marked line.

OR

b. Use a grinder to remove the entire section of the frame flange up to the marked line.

2. Carefully smooth and blend the modified area into the unmodified flange area. Remove all sharp edges (refer to Figure 2).

OTHER APPLICABLE ARTICLES: NONE

WARRANTY STATUS: Eligible Under Basic Warranty Coverage

LABOR ALLOWANCE

OPERATION	DESCRIPTION	TIME
982118A	Grind Bellhousing	0.8 Hr.
982118B	Grind Method - Single Frame Rail	1.6 Hrs.
982118C	Grind Method - Dual Frame Rail	1.9 Hrs.
982118D	Plasma Cutter Method - Single Frame Rail	1.6 Hrs.
982118E	Plasma Cutter Method - Dual Frame Rail	1.7 Hrs.

DEALER CODING

BASIC PART NO.	CONDITION CODE
5016	07

CASIS CODES: 205000, 702000, 702100

Cooling System - Heater Supply Tubes Crack And/Or Leak Coolant - Vehicles Equipped With Detroit Diesel, Cummins N14 Or Cummins M11 Engine - Built Through 4/1/97	**Article No. 98-23-7**

[illegible] WITH MAXXFORCE, LOUISVILLE

[illegible] crack and/or leak coolant on some vehicles. This may be caused by the heater supply not being [illegible] cracking and leaking. Refer to Section 12-02 of the appropriate Louisville/AeroMax Service Manual

PART NUMBER	PART NAME
F8HH-18663-CA	Heater Supply Tube - DDC (With 101 BBC)
F8HH-18696-CA	Heater Supply Tube - DDC (All BBC)
F8HH-18663-BA	Heater Supply Tube - N14 (111/113/122 BBC)
F8HH-18696-BA	Heater Supply Tube - M11 (All BBC)

OTHER APPLICABLE ARTICLES: NONE

WARRANTY STATUS: Eligible Under Basic Warranty Coverage

LABOR ALLOWANCE

OPERATION	DESCRIPTION	TIME
982307A	Replace Heater Supply Tubes	0.9 Hr.

DEALER CODING

BASIC PART NO.	CONDITION CODE
18663, 18696	01

CASIS CODES: 208000, 402000, 409000

98-23 *Publication Date: NOVEMBER 12, 1998*

Steering - Leak From Power Steering Reservoir Cap	Article No. 98-23-19

[illegible] TRUCK:

[illegible] contaminated. When the relief valve opens, fluid is directed upward and under certain conditions may leak through the vent hole in the [illegible] Reservoir Filter Cap (Figure 1) to the [illegible] Baffle on top of the filter. Refer to the Instruction Sheet included within the Power

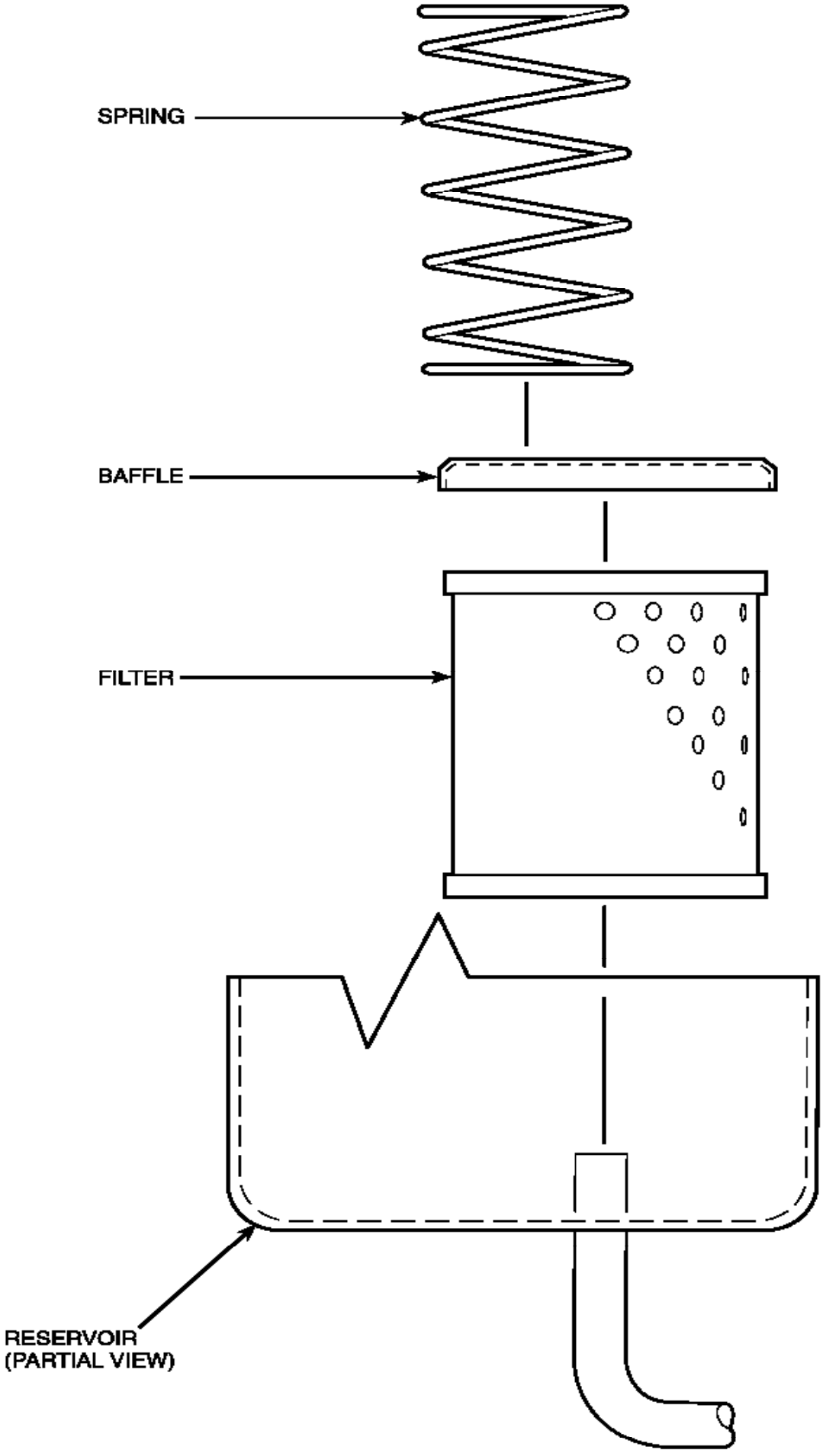

SPRING
BAFFLE
FILTER
RESERVOIR
(PARTIAL VIEW)

Figure 1 - Article 98-23-19

PART NUMBER	PART NAME
XC45-3C602-AA	Power Steering Reservoir Filter Kit

OTHER APPLICABLE ARTICLES: NONE

WARRANTY STATUS: Eligible Under Basic Warranty Coverage

LABOR ALLOWANCE

OPERATION	DESCRIPTION	TIME
982319A	Install Power Steering Reservoir Filter Kit	0.4 Hr.

DEALER CODING

BASIC PART NO.	CONDITION CODE
3531	42

CASE CODES: 202000, 209000

98-23 ***Publication Date: NOVEMBER 16, 1998***

• **Brakes - Anti-Lock Brake Lamp Illuminated** • **Lamp - Anti-Lock Brake Lamp Illuminated**	**Article No. 98-23-22**

APPLICATION

AL7 Module Kit	Replaces AL6 Kits (These are no longer to be used)
F8HT-2B373-CA	F7HZ-2B373-CA; F7HZ-2B373-DA; F7HZ-2B373-EA; F7HZ-2B373-FA F8HZ-2B373-AA; F8HZ-2B373-BA; F8HZ-2B373-CA; F8HZ-2B373-DA F8HZ-2B373-EA; F8HZ-2B373-FA; F8HZ-2B373-GA; F8HZ-2B373-HA

If a new relay is required, order the appropriate part listed below.

RELAY VALVES

Part Number	Usage
F8HT-2A449-AA	Truck model less traction control
F8HT-2A449-BA	Truck model with traction control
F8HT-2A449-CA	Tractor model less traction control
F8HT-2A449-DA	Tractor model with traction control

FALSE ABS WARNING LAMP ILLUMINATION

FALSE ABS CODES IN THE OPTIONAL MESSAGE CENTER

ABS LAMP ILLUMINATION WITH RIGHT FRONT MODULATOR LED ILLUMINATED ON ECU

TEST 1

START HERE

Hold magnet over "Reset" for 3 seconds with vehicle ignition "ON."

Remove magnet. Is "ECU" light "ON"?

NO

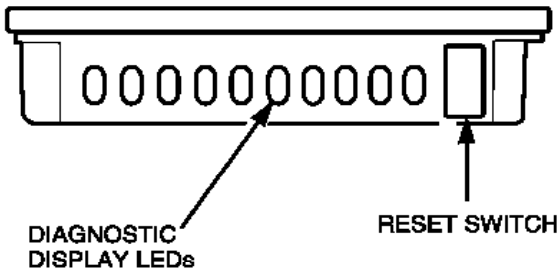
Note which LED(s) is illuminated.

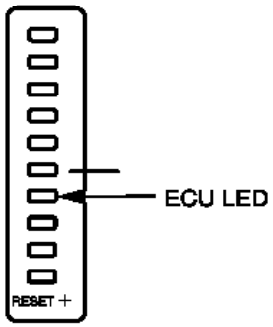
If four (4) or more red LEDs are illuminated, replace ECU with Service Kit F8HT-2B373-CA. Follow configuration instructions. Test vehicle. If front right mod. fault is illuminated, test modulators per Test 2 instructions. Repair as required. Reset ECU and test vehicle. If right front mod. is illuminated, check electrical system.

If less than four (4) LEDs are illuminated, go through the full diagnostic procedure.

YES

Replace ECU with Service Kit F8HT-2B373-CA. Follow self configuration instructions.





TB-5620-A

Figure 1 - Article 98-23-22

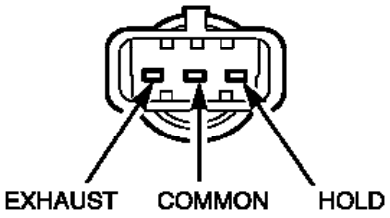
TEST 2

START HERE

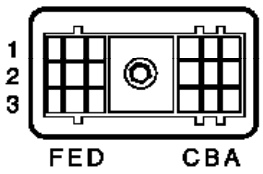
Go to modulator, inspect wiring connector. Disconnect connector and test resistance between pins on modulator. Refer to the following resistance values for the Bendix M-21 modulator.

Hold to common:	Read 3.5 to 5 ohms
Exhaust to common:	Read 3.5 to 5 ohms
Exhaust to hold:	Read 7 to 10 ohms

Test each pin to vehicle ground and note no continuity.

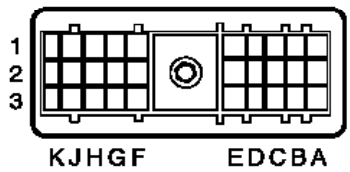


18-PIN CONNECTOR



F1 LEFT REAR MOD. COMMON
D1 LEFT REAR MOD. EXHAUST
E1 LEFT REAR MOD. HOLD
A1 RIGHT REAR MOD. COMMON
B1 RIGHT REAR MOD. EXHAUST
C1 RIGHT REAR MOD. HOLD

30-PIN CONNECTOR



H1 LEFT FRONT MOD. COMMON
F1 LEFT FRONT MOD. EXHAUST
G1 LEFT FRONT MOD. HOLD
C1 RIGHT FRONT MOD. COMMON
E1 RIGHT FRONT MOD. EXHAUST
D1 RIGHT FRONT MOD. HOLD

Resistance readings correct? NO → Replace the modulator.

YES

Reconnect connector to modulator. Turn ignition on and pass magnet over reset on EC-16. Note reaction of red LEDs.

Are any red LEDs illuminated? NO → Repeat the "initial startup procedure."

YES

Same red LEDs illuminated? YES → Repair or replace modulator wire harness

If a problem mysteriously reoccurs and no apparent cause can be detected during troubleshooting, closely inspect the quality of the power supply to the anti-lock system. Check the vehicle wiring, wiring connectors AND the alternator. Defects in these components can cause false failure indications.

Figure 2 – Article 98-23-22

IF THE DTC CODES DO NOT DISAPPEAR WHEN THE MAGNET IS HELD OVER "RESET," REPLACE ECU WITH SERVICE KIT F8HT-2B373-CA.

PART NUMBER	PART NAME
F8HT-2B373-CA	AL7 Module Kit
F8HT-2A449-AA	Relay Valve
F8HT-2A449-BA	Relay Valve
F8HT-2A449-CA	Relay Valve
F8HT-2A449-DA	Relay Valve

OTHER APPLICABLE ARTICLES: NONE

WARRANTY STATUS: Eligible Under Basic Warranty Coverage

LABOR ALLOWANCE

OPERATION	DESCRIPTION	TIME
982322A	Test 1, Diagnosis	0.3 Hr.
982322B	Replace Electronic Control Unit (ECU)	0.3 Hr.
982322C	Extra Time For Road Test	0.3 Hr.
982322D	Extra Time For Test 2, Diagnosis	0.1 Hr.
982322E	Extra Time To Replace Relay Valve	0.6 Hr.
982322F	Extra Time For Wire Repair	0.4 Hr.

DEALER CODING

BASIC PART NO.	CONDITION CODE
2B373	42

CASIC CODES – 204000, 204100, 206000, 301000, 309000

Message Center - False Messages In Message Center - Vehicles Equipped With 2-Channel Anti-Lock Brake System (ABS)	Article No. 98-23-23

MODELS: 1999 MAXXFORCE 9 AND 11 DIESEL ENGINES

SERVICE PROCEDURE

2. ...is wire harness -14405- cut Circuits 712 P(18) and 716 Y(18) going to the ABS control module located on ...connector, Pins A3 and B3 of the ABS control module connector.

...be found in Section 08-09 of the appropriate Heavy Truck Service Manual.

WARRANTY STATUS: Eligible Under Basic Warranty Coverage And Emissions Warranty Coverage

LABOR ALLOWANCE

OPERATION	DESCRIPTION	TIME
982323A	Revise ABS Module Wiring	0.3 Hr.

DEALER CODING

BASIC PART NO.	CONDITION CODE
2C219	42

BASIC CODES: 204000, 206000, 209000, 291000, 299000

Interior - Instrument Panel Plate Cracks At Parking Brake Valve - Vehicles Built Through 12/19/97	Article No. 98-24-3

SUPERSEDES: This TSB article is being republished in its entirety to revise the Service Procedure and provide artwork.

OPTIONS: [illegible]

CONDITION: Trailer air supply control valve may [illegible] This may be caused by aggressive actuation of either the trailer air supply control valve or the instrument panel plate is thicker and has greater strength to reduce [illegible]. Refer to the following Service Procedure for details.

SERVICE PROCEDURE

Refer to Figure 1.

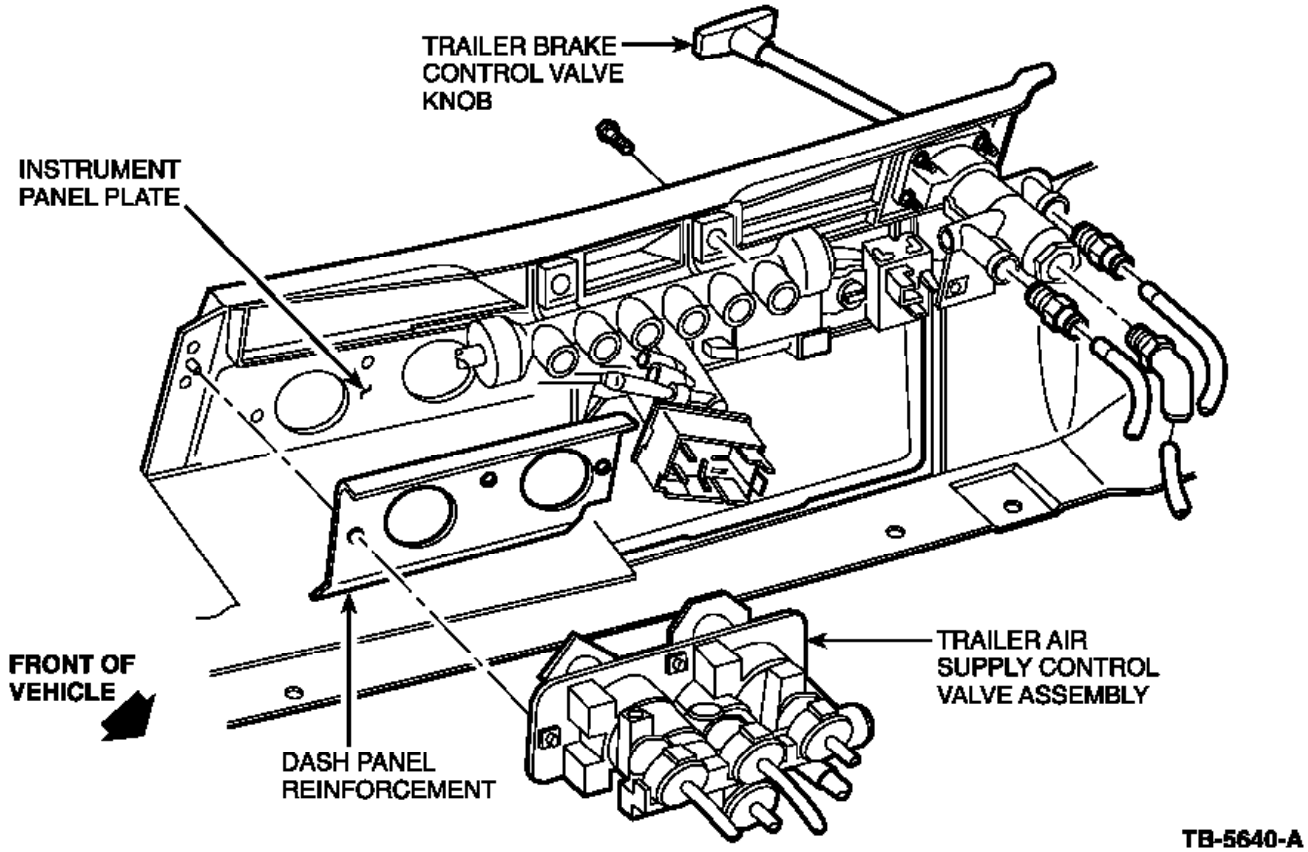


Figure 1 - Article 98-24-3

1. Remove the trailer brake control valve knob by pulling it straight away from the RH instrument panel finish panel.
2. Remove the eight (8) screws from the RH instrument panel finish panel.
3. **DO NOT DISCONNECT THE AIR LINES.** Disconnect the [illegible] and position the RH instrument panel finish panel out of the way.
4. Remove the [illegible] from the trailer air supply control valve and position the trailer supply valve out of the way.
5. Remove the screws attaching the trailer air supply control valve to the instrument panel plate and position the trailer air supply control valve to the instrument panel plate and position the trailer.
6. Remove the [illegible] instrument panel plate and move the instrument panel plate rearward until it [illegible].
7. Remove the [illegible] and the trailer air supply control valve assembly, "2A622", between the Instrument Panel Plate [illegible].
8. Reverse Steps 1-7 to reinstall.

PART NUMBER	PART NAME
XC45-80044D28-AAW	Instrument Panel Plate
18-37257-000 (Sterling)	Dash Panel Reinforcement

OTHER APPLICABLE ARTICLES: NONE

WARRANTY STATUS: Eligible Under Basic Warranty Coverage

LABOR ALLOWANCE

OPERATION	DESCRIPTION	TIME
982403A	Replace Instrument Panel Plate	0.6 Hr.

DEALER CODING

BASIC PART NO.	CONDITION CODE
80044D28	01

BASIC CODES: 107000, 201000, 202000

Electrical - New Terminal Grease Released For Service	**Article No. 98-24-6**

[illegible] VICTORIA
[illegible]
[illegible]
[illegible] CONTINENTAL, GRAND MARQUIS
[illegible]
[illegible] CAR, TOWN CAR
[illegible]
[illegible] F, F-150, F-250 LD
[illegible]
[illegible] MOUNTAINEER
[illegible] RIES
[illegible] AEROMAX, LOUISVILLE
[illegible]

Ford Motor Company has released a new Electrical Grease (F8AZ-19G208-AA) to reduce the possibility of moisture corrosion at the terminal. And the new grease during electrical connection repair.

SOME MISAPPLICATIONS GREASE SHOULD NOT BE USED IN HIGH VOLTAGE CONNECTIONS FOR SPARK PLUG AND

PROPER USES OF THE NEW ELECTRICAL GREASE INCLUDE:

- Electrical Connectors
- Battery Connections
- Light Sockets
- Starter Terminals

DO NOT USE ON:

- Spark Plug Wires
- Coil Wires
- Spark Plug-to-Coil Connections
- Low Current Flow Switches (12V Systems less than 0.1 amp)

OTHER APPLICABLE ARTICLES: NONE

WARRANTY STATUS: INFORMATION ONLY

CANADA CODES: 201200, 201100, 201200, 202000, 203000, 203200, 204000, 205000, 601200

98-25 *Publication Date: DECEMBER 8, 1998*

Front End Accessory Drive Belt (FEAD) - FEAD Belt May Wear And/Or Come Off - Vehicles Equipped With Detroit Diesel Engine - Vehicles Built Through 12/30/1997	**Article No. 98-25-7**

[illegible]

This TSB article is being republished in its entirety to revise the Service Procedure.

[illegible] air conditioning compressor/alternator support bracket wearing and causing a misalignment with the other pulleys in the [illegible]. Refer to the following Service Procedure for details.

SERVICE PROCEDURE

[illegible] BANDED DRIVE BELT IS AVAILABLE FOR THE ALTERNATOR, REFER TO TSB «97-9-22»

[illegible] 12-03A AND 14-02 FOR SPECIFIC PROCEDURES, WARNINGS, AND CAUTIONS FOR THESE COMPONENTS AND SYSTEMS.

FOR VEHICLES WHICH "HAVE" ALREADY BEEN REVISED USING TSB «97-19-24»

AIR CONDITIONING COMPRESSOR («FIGURE 1»)

1. [illegible]
2. [illegible]
3. [illegible]
4. [illegible]
5. [illegible] A/C Compressor Support Brackets (F7HZ-19E633-AA and F7HZ-19D775-AA) with two (2) [illegible] 10239-CC («Figure 1», Item 2) and space "A" between [illegible]
6. [illegible] [illegible] and the [illegible] (44880-S2) and the [illegible]
7. Reinstall the A/C compressor and drive belts using carryover hardware and torque bolts to specification.

ALTERNATOR («FIGURE 2»)

1. [illegible]
2. [illegible]
3. [illegible]
4. [illegible]
5. [illegible] excess length of the [illegible] alternator front and rear bosses.
6. [illegible] «Figure 2», Item [illegible]
7. [illegible] 3" Flatwasher (44880-S2) to the back side of the alternator rear boss as shown in «Figure 2» and torque bolts to specification.

FOR VEHICLES WHICH "HAVE NOT" BEEN PREVIOUSLY SERVICED USING TSB «97-19-24»:

AIR CONDITIONING COMPRESSOR («FIGURE 1»)

1. [illegible]
2. [illegible]
3. [illegible]
4. Remove and discard the two (2) existing support brackets (F7HT-19E633-AA and F7HT-19D775-AA) [illegible] F7HT-10239-CD. THE MACHINING [illegible]
5. [illegible] «Figure 3» [illegible] shop [illegible]
6. [illegible] A/C Compressor Support Brackets (F7HT-19E633-AA and F7HT-19D755-AA) with two (2) [illegible]
7. [illegible] support bracket («Figure 1», Item 2) and space "A" between the front and [illegible]
8. [illegible] is larger than 1.65mm (0.065"), use the spacer and a Flatwasher (44880-S2). [illegible] support bracket («Figure 1», [illegible]

ALTERNATOR («FIGURE 2»)

1. [illegible]
2. [illegible]
3. [illegible]
4. [illegible]
5. [illegible] excess length of the [illegible] alternator front and rear bosses.
6. [illegible] «Figure 2», Item [illegible]
7. [illegible] 3" Flatwasher (44880-S2) to the back side of the alternator rear boss as shown in «Figure 2» and torque bolts to specification.

PART NUMBER	PART NAME
F7HZ-19E633-AA	A/C Compressor Support Bracket
XC4Z-18356-AA	Spacer
44880-S2	9/16" Flatwasher

OTHER APPLICABLE ARTICLES:

- 97-9-22

SUPERSEDES: 97-19-24

WARRANTY STATUS: Eligible Under Basic Warranty Coverage

LABOR ALLOWANCE

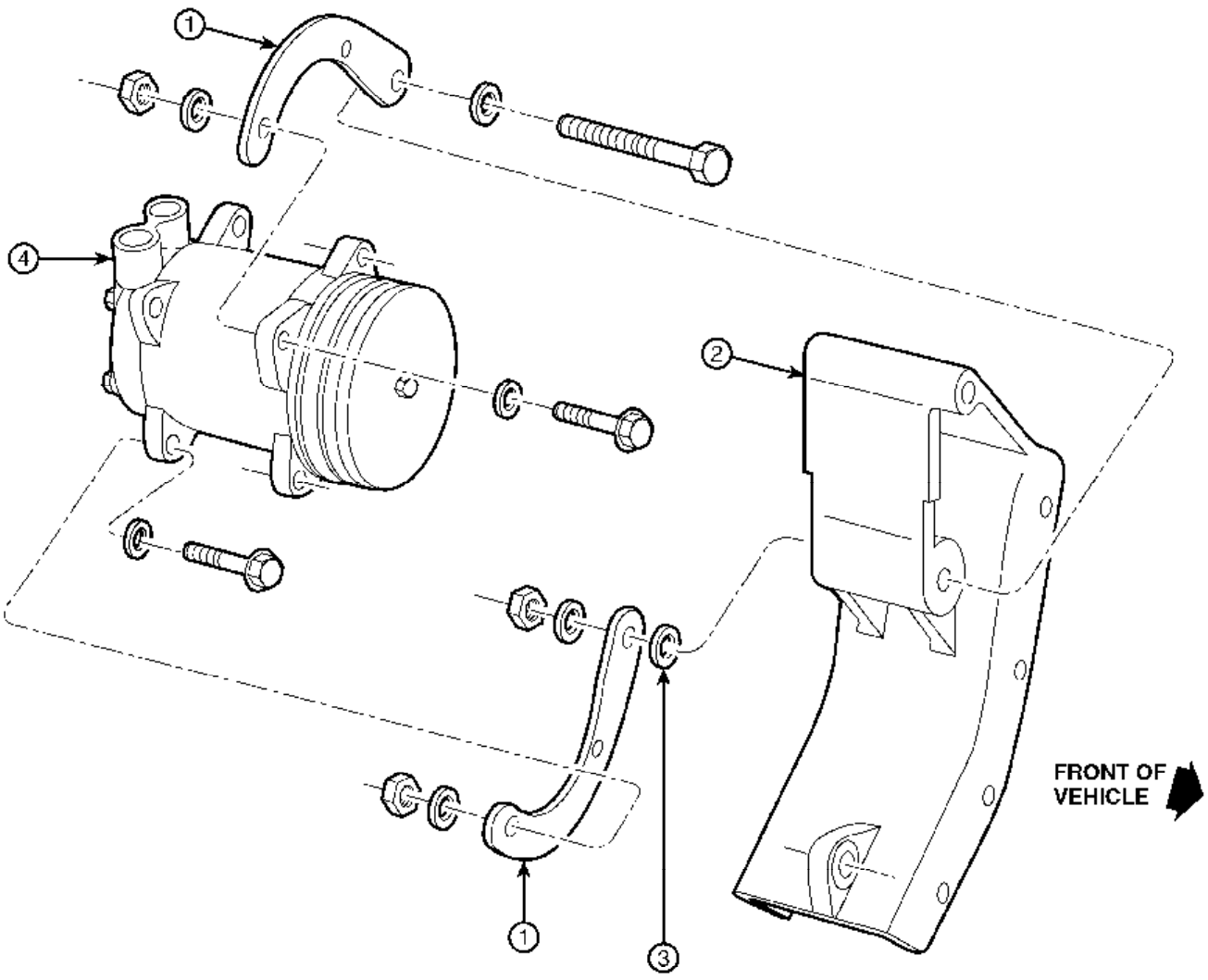
OPERATION	DESCRIPTION	TIME
982507A	Use M-Time In Accordance To The Warranty And Policy Manual	

DEALER CODING

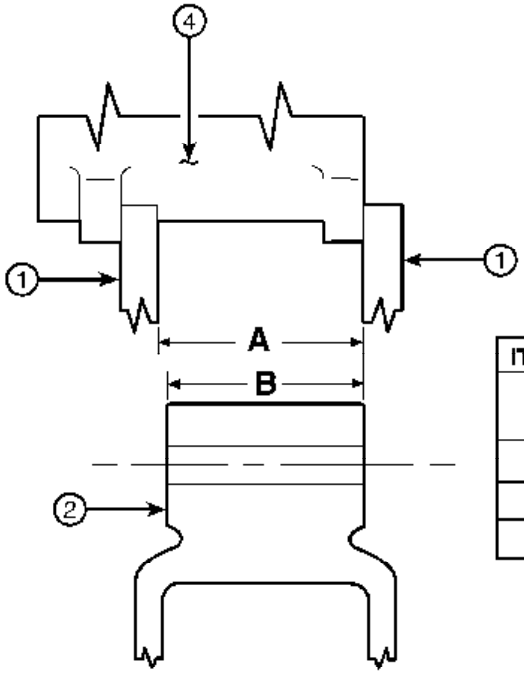
BASIC PART NO.	CONDITION CODE
19E633	30

OASIS CODES: 203100, 206000, 208200, 303000, 402000, 497000, 499000, 702000, 702100

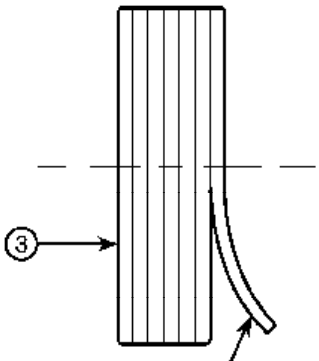
NEW A/C COMPRESSOR MOUNTING



ADJUSTABLE SPACER WITH 0.003″ SHIMS –
28.6mm ODx14.35mm ID – 1.65mm THICK
(1.125″ ODx0.565″ ID – 0.065″ THICK)



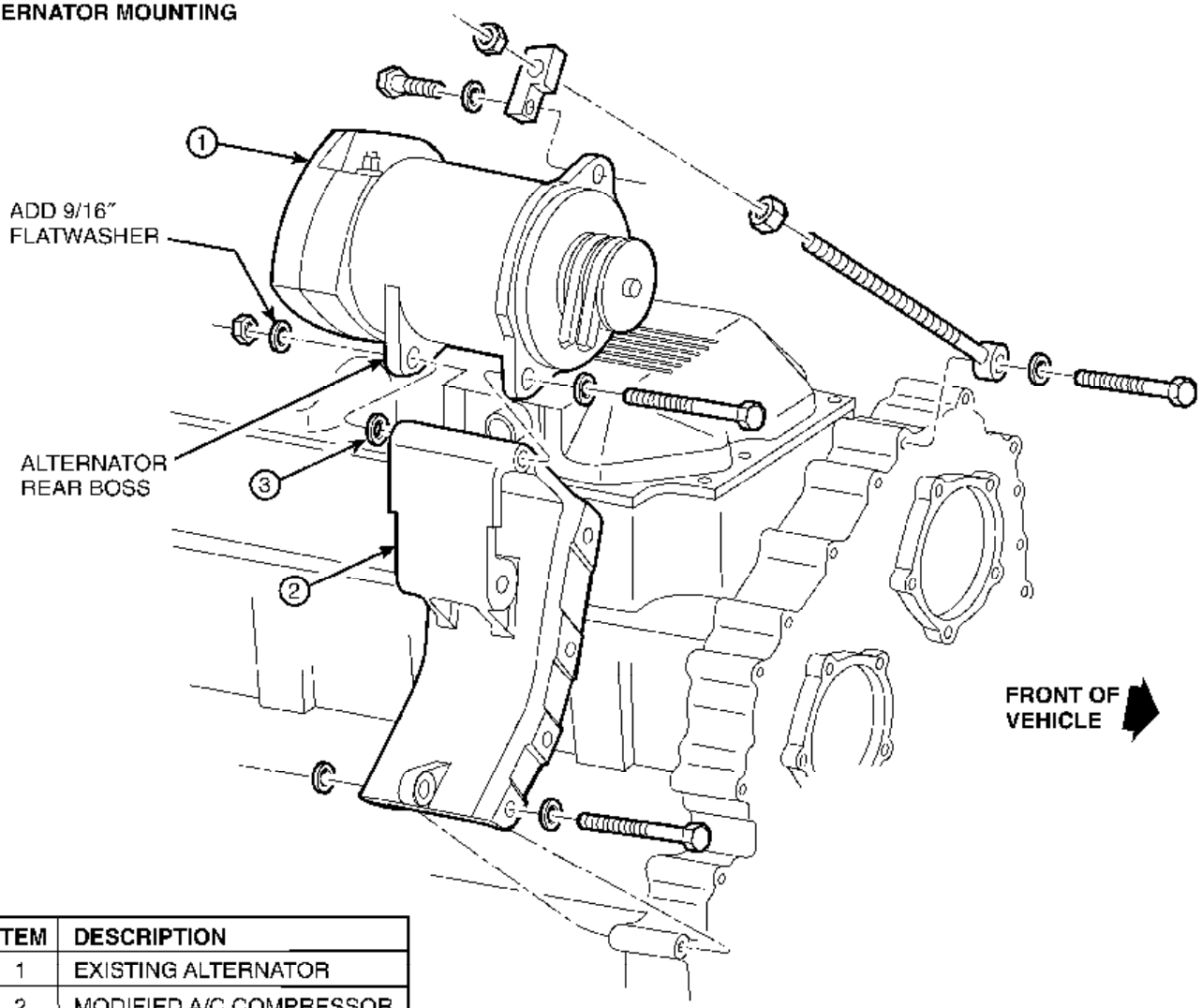
ITEM	DESCRIPTION
1	FRONT AND REAR A/C COMPRESSOR BRACKET
2	MODIFIED SUPPORT BRACKET
3	ADJUSTABLE SPACER
4	EXISTING A/C COMPRESSOR



PEEL SHIMS OFF
TO THE THICKNESS
NEEDED TO
FILL GAP (A-B)

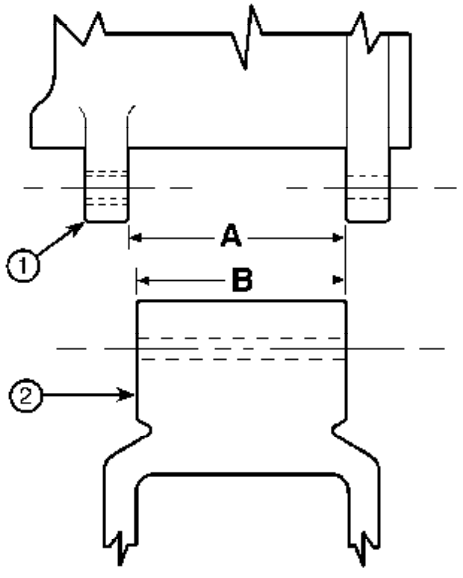
Figure 1. Article 98.35.7

ALTERNATOR MOUNTING



ITEM	DESCRIPTION
1	EXISTING ALTERNATOR
2	MODIFIED A/C COMPRESSOR SUPPORT BRACKET
3	ADJUSTABLE SPACER

NOTE: NO NEW FASTENERS ARE REQUIRED.



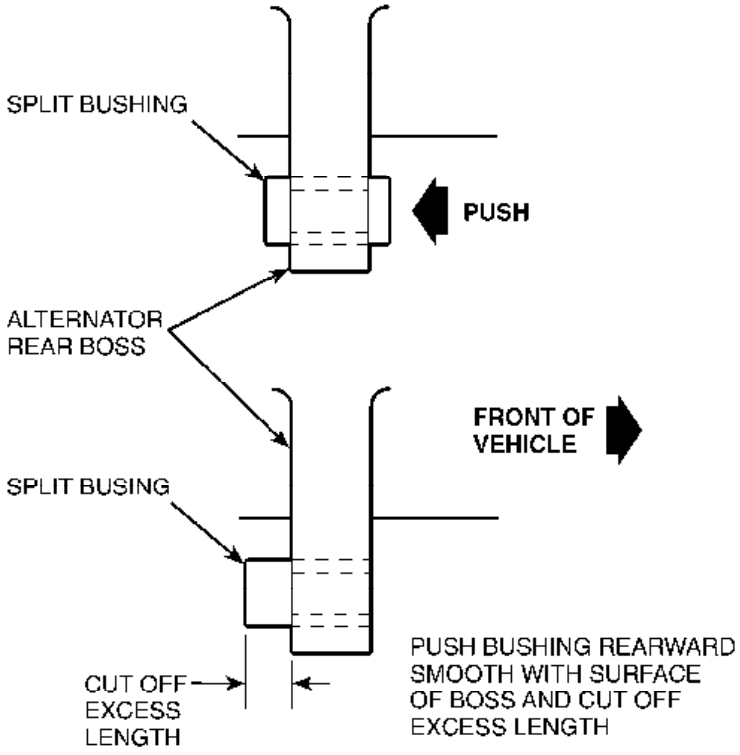
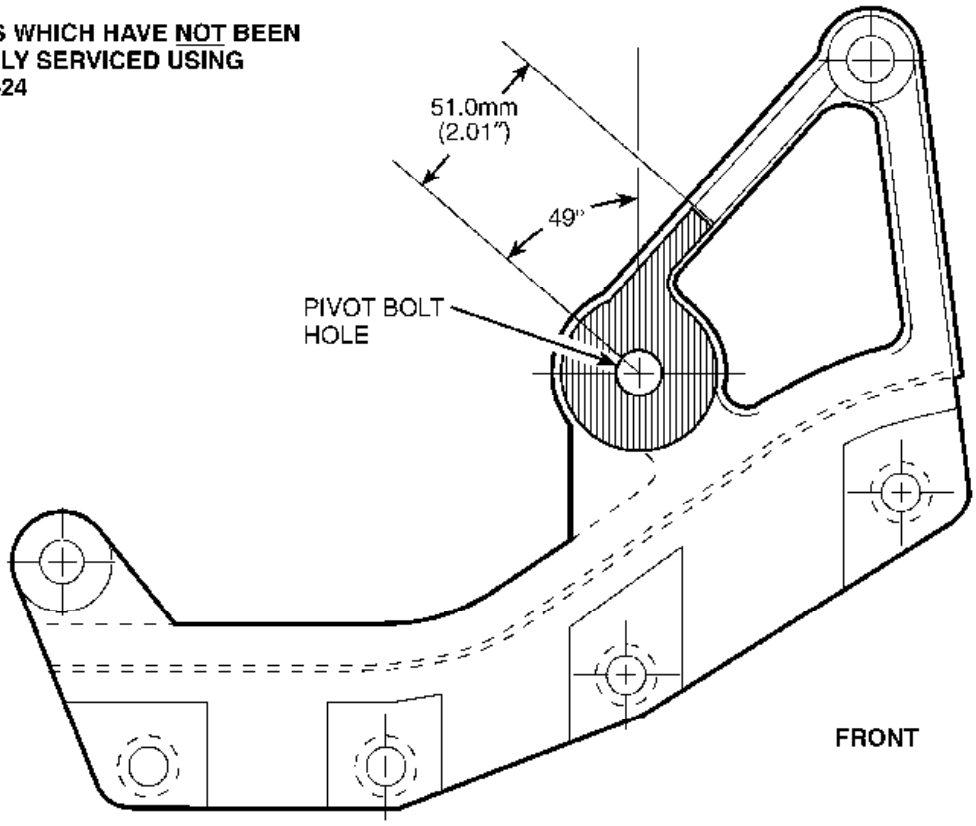


Figure 2 - Article 98.35.Z

F7HT-10239 MODIFICATION

FOR UNITS WHICH HAVE NOT BEEN PREVIOUSLY SERVICED USING TSB 97-19-24



REMOVE MATERIAL IN SHADED AREA – SURFACES MUST BE PARALLEL AFTER MACHINING IS COMPLETE AND PERPENDICULAR TO THE PIVOT BOLT HOLE

NOTE: DIMENSIONS ARE GIVEN IN MILLIMETERS. THOSE IN PARENTHESES ARE IN INCHES.

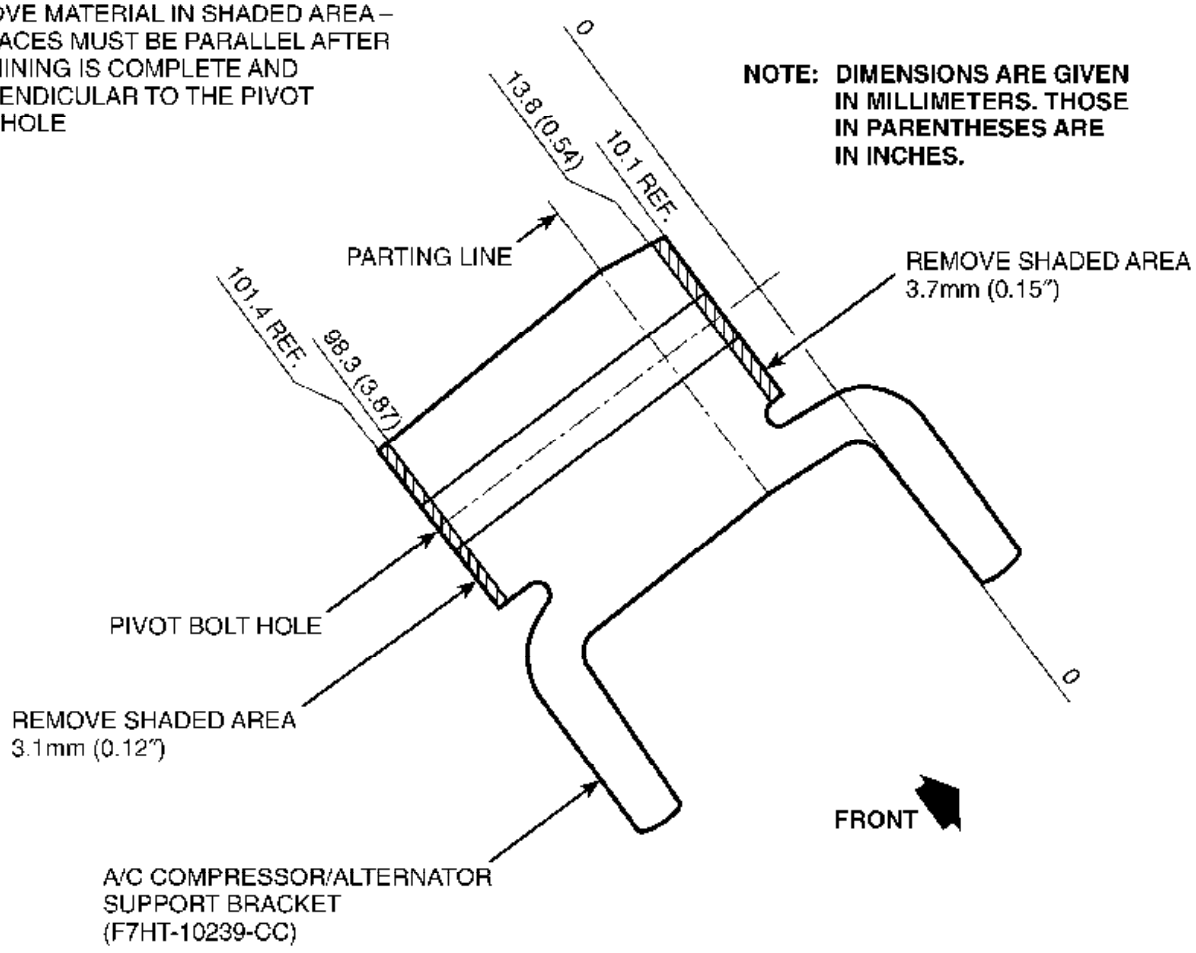


Figure 2 - Article 22.25.7

98-25 *Publication Date: DECEMBER 14, 1998*

Exhaust - Frame-Mounted Vertical Support Cracks At Bend	Article No. 98-25-20

APPLICATION: AEROSTAR, RANGER, RANGER XLT, RANGER XL, RANGER SPORT, RANGER FLARESIDE, RANGER SUPERCAB, RANGER SUPERCAB XLT, RANGER SUPERCAB XL, RANGER SUPERCAB SPORT, RANGER SUPERCAB FLARESIDE, F-SERIES LIGHT TRUCK, F-SERIES SUPER DUTY, BRONCO, BRONCO XLT, BRONCO XL, BRONCO SPORT, BRONCO II, BRONCO II XLT, BRONCO II XL, BRONCO II SPORT, BRONCO II FLARESIDE, E-SERIES VAN, E-SERIES WAGON, E-SERIES CUTAWAY, E-SERIES STRIPPED CHASSIS, ECONOLINE VAN, ECONOLINE WAGON, ECONOLINE CUTAWAY, ECONOLINE STRIPPED CHASSIS, MUSTANG, MUSTANG GT, MUSTANG LX, MUSTANG COBRA, MUSTANG MACH 1, MUSTANG SVT COBRA, MUSTANG SVT COBRA R, MUSTANG CONVERTIBLE, MUSTANG GT CONVERTIBLE, MUSTANG LX CONVERTIBLE, MUSTANG COBRA CONVERTIBLE, MUSTANG MACH 1 CONVERTIBLE, MUSTANG SVT COBRA CONVERTIBLE, MUSTANG SVT COBRA R CONVERTIBLE, TAURUS, TAURUS GL, TAURUS LX, TAURUS SE, TAURUS SHO, TAURUS WAGON, TAURUS GL WAGON, TAURUS LX WAGON, TAURUS SE WAGON, TAURUS SHO WAGON, THUNDERBIRD, THUNDERBIRD LX, THUNDERBIRD SUPER COUPE, THUNDERBIRD SUPER COUPE LX, WINDSTAR, WINDSTAR GL, WINDSTAR LX, WINDSTAR SE, WINDSTAR SPORT, WINDSTAR WAGON, WINDSTAR GL WAGON, WINDSTAR LX WAGON, WINDSTAR SE WAGON, WINDSTAR SPORT WAGON

Vehicles with frame-mounted vertical muffler supports may exhibit a crack along the pipe bend. This may be caused by [illegible] pipe has been reinforced internally with a doubler pipe to reduce the possibility of [illegible] (XC4Z-5D220-AA)

PART NUMBER	PART NAME
XC4Z-5D220-AA	Support Pipe

OTHER APPLICABLE ARTICLES: NONE

WARRANTY STATUS: Eligible Under Basic Warranty Coverage

LABOR ALLOWANCE

OPERATION	DESCRIPTION	TIME
982520A	Replace Exhaust Support Pipe	0.5 Hr.

DEALER CODING

BASIC PART NO.	CONDITION CODE
5D220	01

CASIS CODES: 402000, 702000, 703200, 703000

Electrical - Using Frame As Ground - Service Tip	**Article No. 98-26-11**

[illegible] ground strap and/or other components that come in contact with the frame. The electrical system does not [illegible] caused by improper grounding [illegible] equipment to a trailer frame and then attach the trailer to the tow vehicle or tractor.

Cab - Revised Hydromount Cab Mount Available For Service	**Article No. 98-26-12**

APPLICATION: F-SERIES TRUCK:
Customers may request a more durable Hydromount Cab Mount when replacement of the mount becomes necessary. The revised Hydromount contains rubber changes to provide greater durability for revised Hydromount Cab Mount (XC4Z-18A160-AA (RH) or XC4Z-18A160-BA (LH)).

PART NUMBER	PART NAME
XC4Z-18A160-AA	Hydromount Cab Mount - RH
XC4Z-18A160-BA	Hydromount Cab Mount - LH

OTHER APPLICABLE ARTICLES: NONE
WARRANTY STATUS: INFORMATION ONLY
CAUSE CODE: 30000: 30100: 30000